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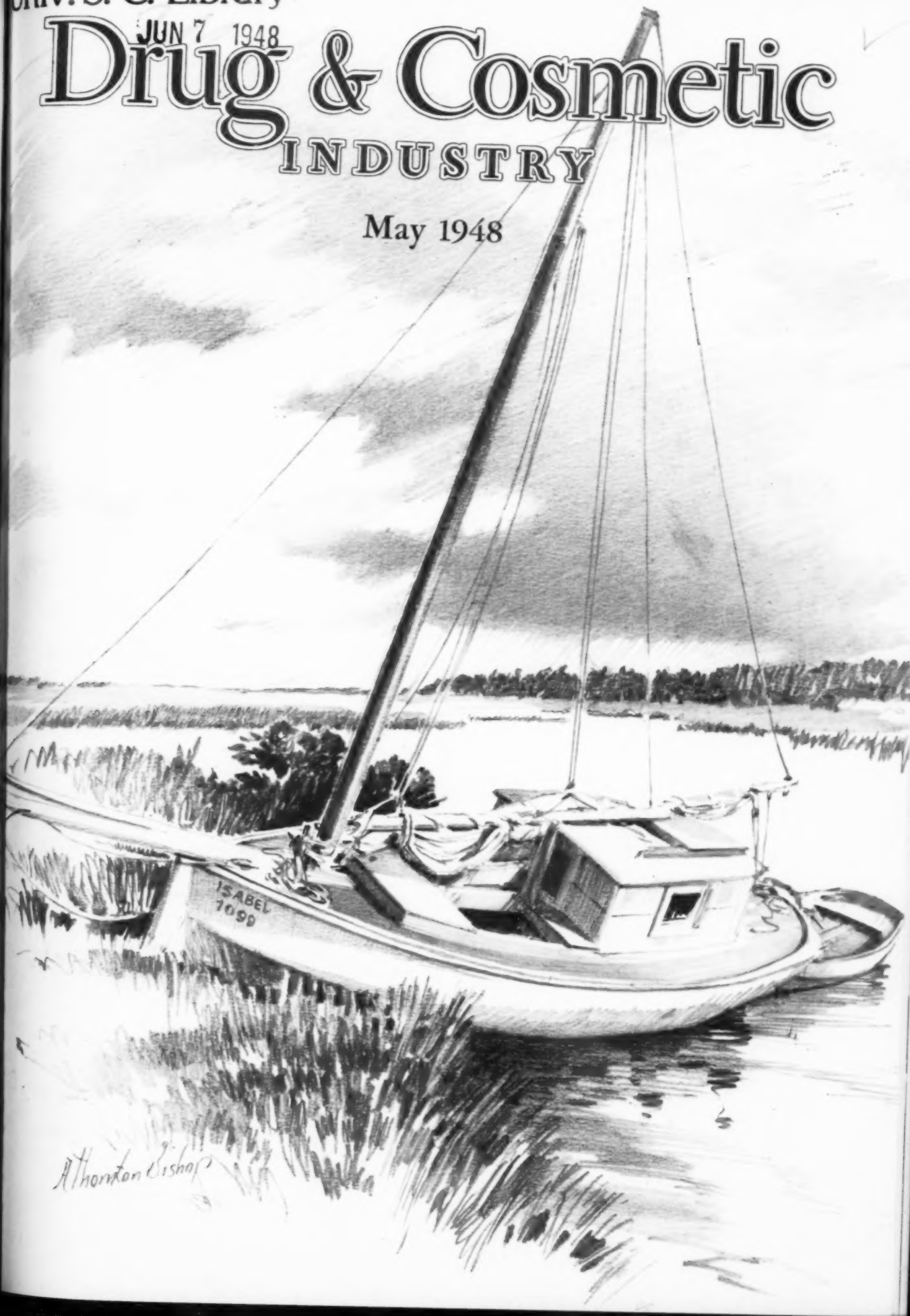
Drug & Cosmetic INDUSTRY

May 1948



WHEN MONSIEUR ARMAND SALTED HIS FAMOUS BEEF RAGOUT HE DIDN'T KNOW ABOUT....

PRECIPITATED CALCIUM CARBONATE

U. S. P.

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Salt processors long ago discovered that salt particles coated with Precipitated Calcium Carbonate have a greater free-flowing quality. Precipitated Calcium Carbonate helps to "cancel out" salt's naturally hygroscopic character.

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Samples and constructive research suggestions on request.

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industrial

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PUBLIC LEDGER BLDG.
INDEPENDENCE SQUARE
PHILADELPHIA 6, PA.

LEADER BLDG.
526 SUPERIOR AVE., N. W.
CLEVELAND 14, OHIO

Drug & Cosmetic INDUSTRY

MAY, 1948

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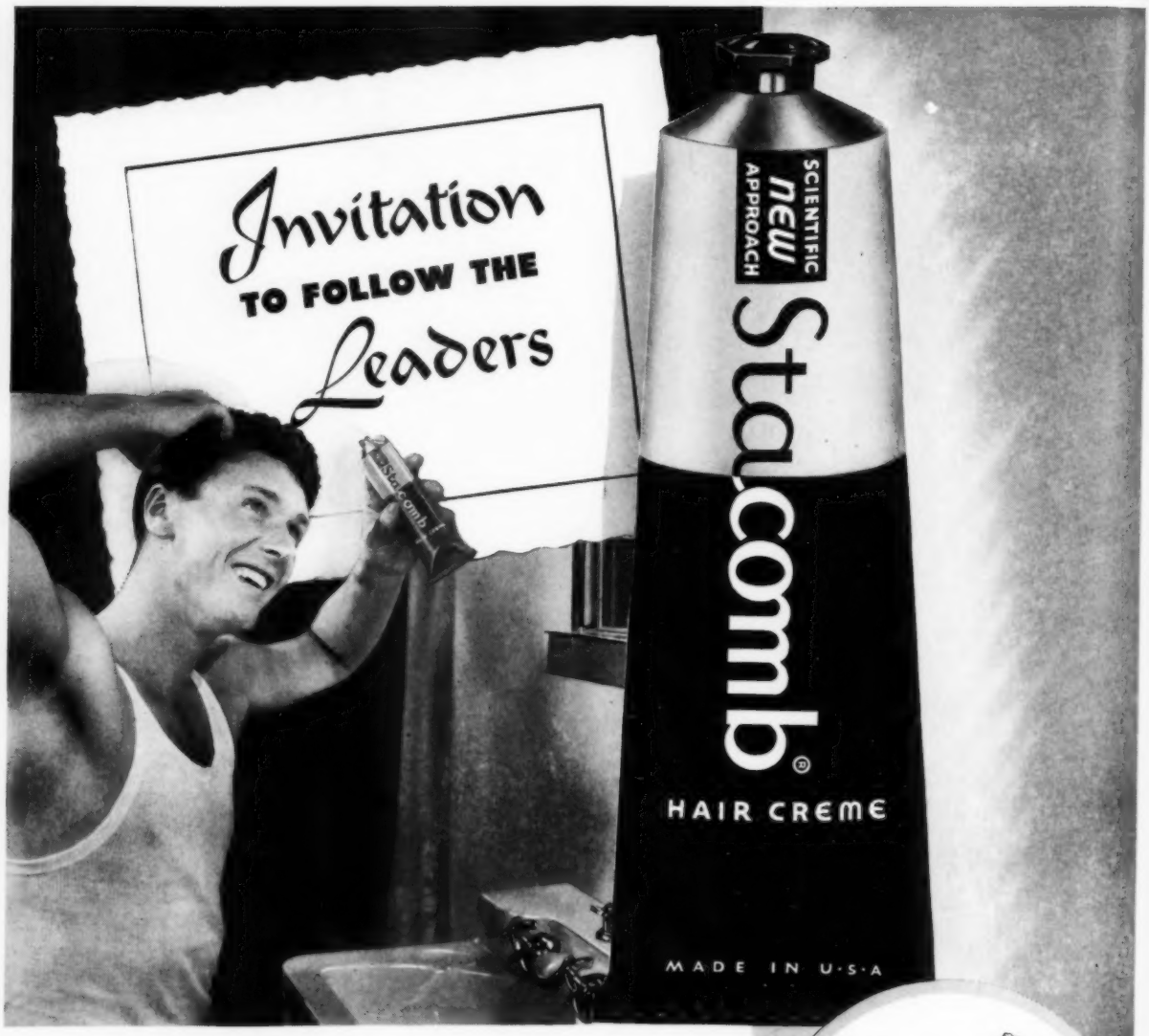


YOU'LL find many a nationally known product packaged in New England *"Sheffield Process"* Tubes. Small wonder STACOMB, and other leaders in the drug, pharmaceutical and cosmetic field "specify New England". For, here are sturdy tubes that consumers prefer for their compact efficiency, easy dispensing of exact amounts without mess and bother, and for care-free packing in travelling bag or medicine chest without danger of breakage. Manufacturers like the way they cut returned goods losses, offer economies in shipping because of light weight, and they prefer their fine uniform quality, with crisp, clean tube decoration. If you market any product which can be packed in Collapsible Tubes, call or write our nearest field man. You'll find him trained to give you the kind of service and the friendly cooperation you need. And this is one invitation that involves no obligation on your part. We'll welcome the opportunity to discuss your packaging problems.

New England
SHEFFIELD PROCESS
TUBES

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 S. CANAL ST., CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, V. P., 500 FIFTH AVE., NEW YORK 18
T. C. SHEFFIELD, 7024 MELROSE AVE., LOS ANGELES 38 • C. W. MILLER, 151 COLE ST., SAN FRANCISCO 17
EXPORT DEPT: 500 FIFTH AVE., NEW YORK 18; CABLE "DENTIFRICE", NEW YORK

"And when you sing the commercial make the audience feel that their Kidneys are about to fold up!"

KEEPING POSTED

Remember the Pine-Board

AMONG the dreams of the new world, during the war, was the planning by many retailers for retail elegance. Some of them achieved their wish. Some department stores, especially on the coast, in the southwest, and in Florida, have built stately pleasure domes of retail elegance which have entranced their customers and achieved top rank as a tourist attraction.

Less ambitious but also hell-bent for glamor, some chains have erected plate glass stores to signal the new era. Quite a few independent retailers, not to be left behind in this new style of elegance, have tapped their savings or gone to the local bank.

Retailing is an art that is easier to criticize than to practice. But every one has the privilege of conjecture.

With the exception of a very small fortunate minority of the people, price is the dominant and ruling factor in buying in a retail store. Convenience, reputation, service, cleanliness, location and other factors are important. There seems to be a happy medium where a retailer can operate efficiently and to the satisfaction of his customers. Below this are stores whose reputation, service and orderliness repel most customers. Is there a limit above this, in ostentation, where the customer may feel unhappily that she is paying for a little more service or luxury than she can afford?

It is true that many of these glamor stores are organized to handle a much larger volume of business, and on the basis of this volume cost of operation has not increased. But on what basis, in the new competition, will this volume be maintained? Will it be price or glamor?

There is an evolution in retailing. There is a strong current trend toward larger stores—to super markets. There is a trend to the attractive specialty branch shop of the department store, in suburbs and small cities. There is a trend to better architecture, to more efficient layout, to better display and to facilities such as parking, child care and other services.

Where all these services are calculated coldly on the basis of retail cost, they are progressive and admirable. But if they raise the cost of selling goods as much as 1 per cent, if they contribute one jot to the rising cost of distribution, those retailers had better watch out.

Hands are writing on the wall right now, for all to read. The walls are those of the bargain basement in the great department stores. The writers are the wives of white collar workers, new visitors to this downstairs store.

This trend downstairs is nationwide. Figures on sales increases for basement business as compared to the other floors of the store are revealing and to retailers must provoke some serious thinking.

No one wants a return of the Pine-Board. They were largely racketeers. Even if they were honest and represented an extreme effort to reduce retail cost, their growth would have turned retail business sections into business slums. America doesn't want or need that kind of cost reduction, at that price.

But the Pine-Board should remain a symbol and a warning to retailers. It must remind them that while their function is to gather and display goods for sale, it should also be their function to do it economically. Retailers used to be quite proud of the Congressional definition: "A retailer is the purchasing agent of the public." We, the public, don't hire purchasing agents who raise costs.

No More Green Pastures

SOME time ago a manufacturer of medicinal and other chemicals told us that they were building a new plant in the southern section of this country. The new plant was being located there, rather than taking the form of an expansion to the northern plant because of a better market for labor in the South, and also because of better water supplies. It just so happened that two other large nationally known corporations also decided to erect plants in this locality. When erection of the plants got under way, labor difficulties in the erection of the plants mounted. For a time work on the erection of all three plants ceased. Finally these labor troubles were overcome and the plants were completed, although the costs were far in excess of original estimates. Then came the time for the chemical manufacturer to put his plant into operation. Labor organizers moved in and difficulties have multiplied, these people having had no past experience with labor organizers and believing everything that the organizers promised them. What the outcome will be, no one knows, but for the manufacturer much of the bloom is off the rose.

Plenty of Fight Here!

WITH reference to our comments on what appeared to be lack of effort in attempts to repeal the federal cosmetic tax, we offer the following letter received from S. L. Mayham, executive vice-president of the Toilet Goods Association. Mr. Mayham writes as follows:

"I don't want to accuse you of bad reporting, but I do want to question the story which appears on page 455 entitled 'What's the matter with cosmetics?'

"The implication of the story is that we have not been able to interest any member of Congress sufficiently in the cosmetic tax to induce him to introduce a repealer. To give you complete information, as of today there are 8 bills for the repeal or reduction of the tax on furs, 5 bills for the repeal or reduction of the tax on jewelry, 8 bills for the repeal or reduction of the tax on luggage, and *16 bills* for the repeal or reduction of the tax on cosmetics. Among the Congressmen who have introduced these bills are O'Toole, Lynch, Curtis, Landis, Gearhart, McDonough, Nadar, Ross, Colmer and Phillips.

"In spite of your story, we are still No. 1 on the list for relief if you except the oleomargarine tax which is in fact a repeal of a penalty and not a repeal of an actual revenue measure. Regardless of whether or not we get relief more has been accomplished for repeal this year than ever before as long as I can remember and I can remember back to the time when the tax was first imposed as a stamp tax. The impact of this work will undoubtedly carry over until next year if we are not fortunate enough to get any relief this year.'

F.T.C. Gems

WITH his usual forthright common sense, F.T.C. Commissioner Lowell Mason made a caustic dissent last week against the Commission's order regarding advertising for "Enrich," a vitamin product marketed by American Dietaids.

Mr. Mason stated that the Commission is following "an over developed sense of responsibility, plus a dim view of the public's intelligence" regarding food, drug and cosmetic advertising.

Under the F.T.C. verdict, Enrich "must discontinue its present advertising which lists a number of symptoms of iron deficiencies unless it is willing to insert a warning that these symptoms may also indicate other ailments which vitamins will not remedy."

Commissioner Mason said: "I see no reason for a vitamin peddler to spend money telling folks what his product is not good for. To put it simply, if a man claims apples are in his basket, must he deny the presence of peaches."

The F.T.C. should treat vitamin ads as it now treats laxative ads in the opinion of Commissioner Mason. This means that under a policy adopted last September, resulting very largely from his activity, no special warnings are required in copy for most common irritant laxatives, skin creams and headache remedies, which are properly labeled under the Food and Drug Regulations.

Expanding further on this subject, Commissioner Mason stated, "When the merchants of America talk like government lawyers, life will be most complicated, advertisements will look like the Federal Register and will be read about as frequently. We will all turn into a species of robot, clicking out I.B.M. data to each other, choosing our canned foods by code, marrying by I.Q., propagating by test tubes and dying by formula. When this millennium has arrived, it will be the proper time for such an order as here stated. My objection to this order is that our timing is bad. The millennium is not here yet."

The passage that aroused Mr. Mason's ire was a nonstop sentence in the commission's stop order to the company full of "whereases and provisos and qualifying clauses which lead to safe but utter confusion known as gobbledygook."

"The soul of advertising is brevity and clarity. We in the government seek the opposite. We want to protect ourselves from being misunderstood. Hence all the whereases."

Then will be the time for so and so's cosmetic company to tell the scullery maid that she will always look like a dope even though she uses their lotion."

Too Big a Bite

DRUG and cosmetic manufacturers, who have had years of uneasy sleep, with the specter of the Federal Trade Commission peeping at them from the shadows, will read with a great deal of interest the dismissal by the Commission of its action against eight tobacco companies.

In October 1939 F.T.C. filed action against these companies. In part the complaint stated that the tobacco companies were favoring certain retail outlets, such as chains, and were giving them advantages in window displays not extended to other of their retailers on "proportionally equal terms." It would seem that this hydra-headed monster, "proportionally equal terms," has seldom had such a severe kicking around.

The R. J. Reynolds Tobacco Company was selected by the F.T.C. as the first victim. It appears that this tobacco company buys the complete window display service from Window Advertising, Inc. This display company pays the retailers directly in cash, which afforded a clear cut case. However, during the nine years in which the F.T.C. vigorously tilted at the windmills of display advertising, it was brought out that 1,700,000 retail outlets and 215,000 manufacturers use them and that to enforce fairly and without discrimination this section of the Robinson-Patman Act would require more than 200,000 separate complaints and actions by the F.T.C. At the rate the F.T.C. is going, trade mathematicians figure that this would take about 150 years.

Commenting again on this disorder within his own house, Commissioner Mason said that the F.T.C.'s position to business is somewhat analogous to two neighbors, one of whom warns the other that "I know you do not know where your property line is, but if you step over it I will shoot you."

Rapid Transit Germs

NEW YORKERS, by paying a higher subway fare of ten cents after July 1, are contributing to the preventive medicine clinics of the City to aid in the diagnosis of heart ailments, cancer, arthritis, and diabetes. This is due to the fact that the increased fare releases funds which were formerly used to make up the transit operating deficit of the City. This means that the person who foregoes the ease and comfort of a taxicab and fights his way through the subway crowd is not only saving money but is making a direct contribution to the health of the city's millions. However, the chap who uses the subway during the rush hours with people coughing and sneezing in his face is not contributing very much to his own health.

Specialized Market

RECENT forecasts by the Bureau of Census revealed some figures that are very startling to certain branches of industry. In both the research and the marketing divisions, manufacturers of pharmaceuticals and of cosmetics can well afford to give some very thoughtful attention to the specialized markets which these figures reveal.

The number of persons 65 years or older in this country has been rising steadily for more than 75 years. They totalled 1,150,000 in 1870, slightly exceeded 3,000,000 in 1900, and in 1945 comprised a market of more than 10,000,000 people.

Assuming a normal mortality and no immigration, the number of people 65 years or older in our population will be more than 17,600,000 in 1955. We have seen the steady growing pressure of this increasing population of the aged in the way unions have taken up the pension plan and in such political movements as "ham and eggs."

Both the medical and the cosmetic problems of older people are extremely interesting to this industry, and may very well lead to specialized products, or even companies specializing in this particular field.

There already happens to be a trend in medical practice for some doctors to specialize in the medical problems of older people, and certainly there has been quite a bit of research in medicine where this part of the population is more susceptible.

For the cosmetic industry, the condition of the aging skin has already been partially met by the new hormone creams, and can certainly open up a much broader field for research. Even in other products of the cosmetic industry, such as make-up and hair treatment, there would seem to be a line of research from the viewpoint of acceptability and good taste that would warrant some thought.

The market today, which should run around 12,000,000 people, is a highly specialized market that must suggest very interesting and profitable business developments.

Nothing So Sure

AMERICANS may not be paying the largest per capita taxes in the world, but they are certainly paying for more different taxes than the citizens of any other country.

In addition to a vast quantity of hidden and not hidden Federal taxes, Americans have a variety of state taxes, county taxes, city taxes and school taxes. Many cities and local communities have recently been given new taxing authority and a vast horde of new nibbles on the payroll is under way.

Trenton, New Jersey, has recently passed license taxes on bagatelle, the paper towel supply business and street piano and organ grinders. Animal shows, midget auto races and every other type of public amusement is receiving the attention of some cities.

A southern town has put a license tax on the manufacturers of artificial limbs, and Little Rock, Arkansas, has reached a present all time high with a $25.00 a year tax on "the sale of watermelons sliced where served on premises and no other license is paid."

Business Good Neighbors

THE meeting of the American Pharmaceutical Manufacturing Association in Havana, Cuba, is the first time that the convention has ever been held in a Latin American country.

Charles Wesley Dunn pointed out that this meeting will not only stimulate this nation's drug trade with the Latin American republics, but will also bind their scientific interests more closely to those of the United States and Canada.

Falling Profits

IN THE annual reports of the drug and cosmetic companies the recurring theme is reduced profits because of higher costs.

James L. Rogers, President of the American Pharmaceutical Manufacturers' Association, said at their current meeting in Havana, "We are geared to a high sales volume with a generally lower percentage of profit which means business is walking a tight-rope. It is common for a company to report that 50 per cent or more of their sales for the current year were for products which did not exist five or ten years ago. In all probability a high percentage of our total sales in 1960 will be products which are yet to be discovered and marketed. This clearly outlines the vital necessity for carrying out and supporting individual and group research products. The industry must also adopt the best methods for effective ethical marketing and still control or lower selling and distribution costs. Effective marketing and distribution is best accomplished through ethical medical advertising and personal detailing. The advantages, disadvantages and contra-indications of a new product must be brought to the attention of the physician and can best be accomplished by the teamwork of pharmaceutical manufacturers and prescription pharmacists."

The problems of the drug and cosmetic industry, as regards the shrinking margin of profits resulting from increased costs and the new problems in marketing and research, are not peculiar to this industry. So far as shrinking profits go, often concealed by a continuing high volume, industry in general is running head on to decisions which will act as correctives.

The National City Bank has computed profit margins per dollar of sales for 1,257 manufacturing companies. These companies reported 7.1 profit per dollar in 1947 compared to 7.5 in 1940 and 7.6 in 1936. These figures are distorted, because the fact is that a few industries, which were greatly depressed during the prewar years, have shown a substantial increase. Actually for most industries, the drop is substantial as the following table shows:

Profit Per Sales Dollar

	1936	*1937*
Autos and trucks	12.5c	6.5c
Beverages	13.6c	7.5c
Chemical products	12.5c	9.5c
Dairy products	3.5c	2.5c
Electrical equipment	11.5c	5.8c
Paint and varnish	7.5c	5.8c
Rubber products	5.9c	4.4c
Tobacco products	9.6c	4.5c

Even these figures do not report the true facts because in many places there were inventory profits during 1947 and generally in industry there were inadequate replacement of fixed assets which must be made at the current high-price level.

This is the year where throughout industry the most careful examination of costs will be made, because cost examination must include distribution as well as manufacturing, and it must be positive in the sense of examining new methods of production which may involve a capital investment, as well as negative in the sense of limiting such things as feather-bedding and other wastes in production.

Prescription Survey

A PRESCRIPTION ingredient survey conducted in Ann Arbor, Michigan, during July and October, 1945, and January and April, 1946 was reported last month. Only one ingredient was contained in 76.1 per cent of the prescriptions; 2 ingredients in 15.1 per cent; and 3 ingredients in 6.6 per cent. Tablets and pills accounted for 39.2 per cent; liquids for 36 per cent; capsules for 18 per cent; and ointments for 6.2 per cent. Per 10,000 prescriptions, sulfadiazine tablets occurred 705 times; sodium bicarbonate tablets, 573 times; codiene phosphate, 423 times; phenobarbital tablets, 282 times; Cosanyl, 272 times; phenobarbital elixir, 210 times; thyroid tablets, 206 times; codeine sulfate, 204 times; ammonium chloride, 193 times; salicylic acid, 187 times; Nembutal capsules, 170 times; sulfathiazol ointment, 164 times; Empirin Compound tablets, 159 times; Charcoal, 147 times; and seconal sodium pulv., 136 times. Narcotics were prescribed 1,883 times per 10,000 prescriptions; barbiturates, 1,434 times; sulfonamides, 1,347 times; vitamins, 1,142 times; aspirin, 575 times; and penicillin, 245 times.

"Good for Man or Beast"

THE J. R. Watkins Company, of Winona, Minnesota, came in for attention in a recent issue of the "Saturday Evening Post." The company claims 20,000,000 customers in this and other countries served at their homes by some 15,000 dealers. The company sells some 300 home remedies, spices, flavoring extracts, soaps, cosmetics, perfumes, household cleaning preparations, insecticides, minerals and medicines for curing small chickens of the roup and ridding cattle of grubs. The firm's oldest product is "Watkins Liniment, good for man or beast," which Watkins sells in a volume of about $5 million a year. The liniment has a base of alcohol and rain water and contains, among other ingredients, Castile soap, safrole for bouquet, camphor for soreness, oil of spruce for antiseptic qualities, and capsicum. Last year the company printed in its plant 3 million calendars, 140 tons of dealers' advance notices, and more than 2 million almanacs.

Watkins products are sold by dealers who buy their goods wholesale from the company and run their own businesses traveling from house to house by automobile, truck, wagon, sleigh, boat, dog sled, and even by camel-back. The best dealers sell about $25,000 worth of goods a year, and the poorest about $3,000. Below this figure he is replaced.

The company is now headed by the founder's grandson, thirty-three year old E. L. (Bud) King, Jr., who has undertaken a program to increase business 20 per cent each year for the next five. Watkins has a plant and 850 dealers in Australia, 1,200 dealers in Canada, a new factory in New Zealand, branches in Sweden and Johannesburg, South Africa, two jobbers in India, and one jobber each in Berne, Switzerland, Singapore, and Hong Kong. Watkins British branch at Birmingham was bombed out by the Germans and has not yet reopened.

The greatest increase in sales is resulting from sending dealers into large cities, a policy undertaken about fifteen years ago. City business is now accounting for about 40 per cent of the firm's sales. City dealers make about 50 calls a day, making sales in about 30 of them. Watkins is even getting a toehold in New York City, having three branches in Harlem, one in the Bronx, and one in Brooklyn. Most of the city business is handled through distributors, there being 300 distributorships in all in cities of 30,000 or over, led by Chicago with 15. Distributors buy from the company at a discount and sell to dealers at wholesale. The distributor maintains a store to supply his dealers, and has charge of advertising in his town, sales meetings, and discharging dealers.

The Market of Latin America

IT IS of interest to note that there are about 46,000 physicians serving the 125,000,000 people of the twenty republics of Latin America. There are 26,000 dentists and 18,000 pharmacists. During 1938 the United States pharmaceutical industry supplied the markets of these countries with approximately $7 million worth of merchandise. During 1947 our industry supplied the same markets with approximately $82 million . . . an increase of 1070 per cent over 1938. As Mr. Harold D. Arneson pointed out to the American Pharmaceutical Manufacturers' Association at their recent meeting, considering that the over-all volume of exports of the pharmaceutical and medicinal products in 1947 amounted to about $180 million, and that the Latin American countries took some $82 million of the total, Latin America is tremendously important to the industry.

Final Dismissal

FEDERAL Judge Fake, at Newark, N. J. just dismissed the action against The Bender Corp. for $300,000, started by the O.P.A. in September of 1945. The Bender Corp. challenged the right of O.P.A. retroactively to change prices which it had previously approved ranging from about $3.00 to $82.00 per gallon of toiletries, without giving notice and an apportunity for hearing.

After approving the various prices for more than 300 different Bender products, the O.P.A. issued an order fixing a single price of $1.25 per gallon for each of the products in spite of the fact that they were all different products. This price later was increased to $2.13. These were the prices which were vacated by the O.P.A. thus acknowledging the validity of the prices originally approved for The Bender Corp. for each of its different products.

The Bender Corp. produces bulk toiletries and maintains a large packaging department exclusively for private label.

Tit For Tat

THERE are reports that retail and wholesale grocers —probably to be joined by book publishers and some of the largest tobacco companies—are fighting back at the retail drug organizations which are protesting against the sale of proprietary drugs in outlets other than the drug stores. These interests are taking the fight to their state legislatures with bills designed to prevent drug stores from operating lunch counters, and selling books and numerous other items of merchandise.

As an example of the extent to which the retail drug organizations are going to keep the sale of commonly-used products out of stores other than drug stores, the State Board of Pharmacy of California is said to be making a study of deaths caused by over-doses of aspirin. The purpose is to prove that aspirin is a dangerous drug and therefore should only be sold in drug stores. If such action were taken it would be a great disservice to the general public since aspirin is considered by most experts to be as safe an analgesic as is available for self-medication.

F.D.A. Policy Upheld

THE fact that manufacturers of proprietary remedies must be able to prove the therapeutic effects of the active ingredients of their preparations was clearly indicated when the three judges of the U. S. Circuit Court of the Ninth Circuit unanimously upheld the decision of the lower court involving the therapeutic value of a product known as Knue-Ovo. Through newspaper advertisements, the product was offered as a treatment for a number of muscular ailments. In its labeling, the drug listed as active ingredients an aqueous extraction of plume thistle, burdock, quassia, sage, cinnamon and other botanicals. Before the lower court, experts, basing their opinions on clinical studies of the drug, testified that the product was without beneficial effect for the ailments mentioned in the advertisements. It was stated that a number of the ingredients had no action as drugs. Much of the evidence of the defendant consisted of case histories of other than medical testimony. The court said "we believe that the interests of the public will be better served by having this product kept off the market altogether."

The Food and Drug Administration sees in this decision added legal strength to FDA's policy of ordering removal from the market of inert glandular products.

Hair Wave Market

SO RAPID has been the expansion of the market for hair wave products and so energetically have many companies jumped into producing or marketing these products that there has been a great deal of conjecture as to how much further this market can expand.

J. P. Spang, Jr., President of Gillette Safety Razor Co., states that Toni sales have shown somewhat greater monthly increases in sales since Gillette took over. The company expects Toni sales to increase for some time to come according to Mr. Spang. He stated that home wave products have so far tapped only 25 per cent of their potential market, with Toni supplying nearly 90 per cent of this market.

Gillette Safety Razor's purchase of the Toni home permanent and shampoo business caused their first quarter earnings to show an increase instead of a decline. For the first quarter of this year, Gillette reported net income of $3,663,716, or $1.65 a share, against $2,904,662, or $1.28 a share for the first quarter of 1947. However, Toni, acquired January 2, 1948, amounted for $1,244,000 of this year's first quarter earnings. If Toni had not been acquired, Gillette would have reported for the first quarter of this year earnings almost $500,000 less than the first quarter of 1947.

New Claim for Tooth Paste

A RECENT speaker at the Chamber of Commerce meeting on export advertising warned that American advertisers in foreign countries do not always say what they mean. His conclusion is that this could be very bad for business.

However, we must admit that some American advertisers may have been getting very high ratings and attention value; for example, an American manufacturer wanted to say that the tooth paste was extruded from the tube in the form of a ribbon. What he actually said in his advertisement was "this tooth paste now becomes pregnant."

In Defense of the Trade-mark

THE AMERICAN Drug Manufacturers' Association points out that in many cases where trade-marks are used in scientific or other literature, the trade-marks are not capitalized or set in quotation marks. One unaware of the facts might readily conceive the trade-marks to be merely descriptive terms. The Association sugests a uniform manner to identify all trade-marks where they appear in publication. Becoming a part of the common language the value of the trade-mark has been lost as in the classic examples of "Aspirin" and "Cellophane." A trade-mark is properly identified as such if it begins with a capital letter, and if the word is placed in quotation marks.

Drug Store Sales Doubled

SALES of retail stores have more than doubled in the last nine years from an average volume of $23,748 for an average store to $59,740, according to the Department of Commerce.

Drug store sales have increased from $25,244 per store to $57,856. This is an increase of 129.2 per cent, which compares with other retailers as follows: grocery stores, 213.5 per cent; jewelry stores, 225.5 per cent and apparel stores, 156.0 per cent.

Property Protection

IN DISCUSSING Fair Trade Laws, E. A. Newcomb, Secretary of the NWDA, stated "attacks on these basic laws which permit a manufacturer of a trade-marked or branded item to establish minimum selling price have claimed that the laws are restrictive." Actually they are but an expansion of patent and trade-mark laws.

They provide for the trade-mark or brand name owner the continuing protection of the property value, lying in his trade-mark or brand name even after it leaves his hands and enters distribution.

The Yanks Are Coming!

DESPITE the effects of the draft and the war generally upon education of scientific personnel, the number of dentists in the country has increased more than 8,000 since 1940 to a total of 78,490. The 1940 census totaled 70,121. Distribution of dentists varies widely ranging from one dentist for each 1,106 people in New York State, to one dentist for each 5,131 people in Mississippi. The national average is one dentist for each 1,817 people, compared with a 1940 average of one dentist for each 1,878 people.

Supreme Court Upholds F.T.C.

THE U. S. Supreme Court in a 7 to 2 decision upheld the Robinson-Patman Act with regard to quantity discounts. The decision upholds the general impression current when the Act was enacted, that the Act "was passed to deprive a large buyer of such advantages except to the extent that a lower price could be justified by reason of a seller's diminished costs due to quantity manufacture, delivery or sale, or by reason of the seller's good faith to meet a competitor's equally low price." The decision was in favor of the Federal Trade Commission in its case against the Morton Salt Co. A majority decision written by Justice Black, from which Justices Jackson and Frankfurter dissented, held that the burden of proving that discounts reflect only actual savings resulting from large orders rests upon the seller.

TROUBLE FOR PERFUMES

By FRAZER V. SINCLAIR

PERFUMERS are not happy. The glorious and stupendous honeymoon that ended nearly two years ago was followed by the expected period of readjustment. But this period of readjustment doesn't seem to be getting anywhere. Does the trouble lie in the perfumes, i.e. their quality and ability to touch a popular appeal, in marketing methods, or has the public gone lukewarm in its desire for perfume?

The honeymoon and the readjustment are worth a few minutes of contemplative reflection.

Never in the history of the world have so many people, at one time and in one place, so eagerly sought perfume. There was a Miami like ebulliency to the ecstacy of this period. Many stories, most of them true, illuminate this period. The buyer of a midwest department store tells this not uncommon experience. A man, obviously in appearance a factory worker, came into the store near closing time. He asked a salesgirl the name of the most expensive perfume in the store. "How many big bottles have you got in the store now?" he asked. The girl told him four. "I'll take all four," he said, and became belligerent when the buyer tried to limit his purchase to one.

It has been repeated many times that in these four years of pyramiding mass earnings, with limited opportunities for spending, that perfumes and cosmetics were preferred out of all reason because money had no other place to go. But this is less than a half-truth. In spite of many restricted commodities, money had plenty of places to go. People spent lavishly, but not for things they did not want. Surely it would be nearer the truth to say that a mass hunger for the symbols of social enjoyment and for the products we have created for personal satisfaction were fed, in part, by the perfume industry.

This period gave proof, which cannot be refuted, that women want perfume, and that to men it is a symbolic gift which men in all walks of life instinctively recognize. There has been no decline in this desire. The decline is in the marginal ability to satisfy this desire and perhaps in faults which lie within the industry.

The readjustment period is clearing up many of the faults which trouble the industry. Retail inventories and close-outs which disrupt manufacturers' planning, inventories held by manufacturers which hold back new products and particularly new packaging are symptoms that will pass. They are not peculiar to this industry. All of these factors, plus clear evidence of a change in consumer buying habits, are apparent or more severe in other industries equally a firm part of our civilization and our determined standard of living. These same temporary adverse factors may be seen in declining attendance in moving picture theaters, in declining sales of jewelry, leather goods, liquor and many other products.

To say that these falling sales represents a decline in the public desire to go to the movies, to have friends in for cocktails, to forego the pleasure of personal adornment with jewelry or perfume would be absurd. These industries must find other answers for today.

The troubles of the perfumer may be more complex than the makers of these other products. His personality has lost the sharp outline of twenty years ago. His product is far more intangible so that price, package and distribution become complex questions of strategy which limit direct action.

It is difficult to analyze what may be the effect of a declining vividness in the personality of many—in fact most perfumers. To fully appreciate this change it is necessary to go back and look at this industry soon after 1930.

At this time there were fairly clear cut divisions in the industry. Some cosmetic companies had a specialized reputation for skin treatment. They were the treatment companies, specializing in creams. Because of a public recognition for this specialization, these companies received preferred patronage and confidence for their creams. This was true of the make-up specialist and particularly true of the perfumer.

At this time, with perhaps a few minor exceptions, companies identified with other branches of the trade found the public unwilling to accept them as a competent creator of a good perfume. This was the day of public confidence in the specialist.

Then came the floral cologne. This was an invention which brought many millions of new dollars to a distressed industry. It was the piracy of an old, classical term of the industry, but it provided a vehicle which had praisworthy social and economic effects. By diluting higher priced perfumes and making these dilutions in four ounce and over bottles at a price to open every pocketbook, the industry made perfume available to every woman in every economic class. Even more the cologne, aided by the new inexpensive bottle atomizer, gave the retailer a golden opportunity to broadly sample perfumes for the first time.

The public acceptance of the so-called floral cologne and its rapid sales growth in the early thirties was an

exhilarating experience. Cologne soon outsold perfume twenty to one and its sales totalled many millions of extra dollars for the industry. It was refreshing proof, during these hard times of eight or ten million unemployed, that the public lacked not the desire for perfume, but the dollars with which to buy it.

This was the era in which the clear cut identity of the perfumer became confused with a horde of invading companies. Where the public had been unwilling to accept a perfume from any creator but the reputable specialist, it now flocked to the retail counters to purchase cologne from any known name. Not even that requirement held for a sufficiently novel package.

This general diffusion of its specialty can be attributed by the perfumer to (1) Price, which opened perfume to millions of new consumers not well acquainted with perfume names and reputations, who had been beyond the scope of perfume advertising, and who were trading in stores not equipped to stock or sell perfume. These people were easily led down the aisle to a cosmetic name they knew through cream or make-up. (2) These early colognes were mostly florals—gardenia had its day. As Gertrude Stein would have said, "a floral is a floral." (3) Many perfumers were very slow on the trigger, largely because of difficult and delicate problems involving prestige.

This dominant cologne period, in which cologne became a part of nearly every cosmetic line and in which some popular, volume sellers were identified with treatment houses or other cosmetic companies, set the stage for a nearly complete breakdown of perfume specialization during the war. It would be a safe estimate to state that perfume was included on more manufacturers' price lists than any single cosmetic, that it received favored advertising attention by the majority of cosmetic companies and that it provided a way for the majority of new companies to enter the industry during this war period.

Now once again the perfumer is faced with a marginal decline of purchasing power. But he must realize that several million additional women have acquired a personal experience realization of the pleasure and satisfaction they enjoyed in using perfume. Will this hunger for perfume be largely satisfied ever again by the perfumer or must this satisfaction continue to come in large part from cosmetic manufacturers?

Whatever the answer, it should seem apparent to prefumers that they must as a specialized group assume greater responsibility for making perfume, in some form as cologne, available to every economic group. The alternative, for them, is the possibility that this broad diffusion of perfume creation throughout the trade will weaken their own claim to a highly specialized creative art.

It is easy to state the problems of the perfumer. But no other business involves so many delicate decisions, based upon so many intangibles where a wrong decision can completely alter the character and personality of a company or bring a loss of prestige with disastrous results. The pattern of their price structure and their distribution is a straight-jacket to unlimited expansion. Even now the controversy over the dram size, the miniature package, the two ounce cologne, does not involve an unwillingness to accept the additional business these lower prices bring. On the contrary, those perfumers who are resistnig this trend feel that they are courageously sacrificing badly needed business as a plain necessity for perserving their identity in a long range profitable market.

The answer seems to be that we need many perfumers seeking identity in several classifications. There is need for the highest quality perfume, severely restricting its distribution and its clientele, to meet the requirements of a discriminating and exacting part of the population. There is need for many companies operating in fairly well defined bands of taste, discrimination and of distribution.

But somewhere along this line a way must be found to make perfume, in some form, broadly available to the public. It will not be easy because the compromise of price and broad distribution with prestige is a feat for a master strategist. The public wants perfume at a price they can pay but they also want those alluring qualities of art and prestige too. The best hope for a return of the perfume specialists is that they have shown in the past so much skill in this delicate manipulation.

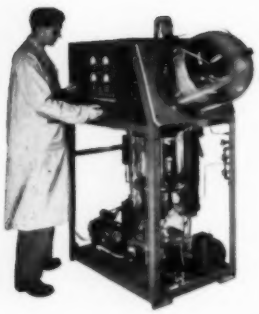
The public has not become lukewarm to perfume nor is there any lack of quality or appeal in the perfumes of today. The perfume industry has every right to set its sights on the lipstick market of over 35 million women. It has every right to assume that these women who use lipstick, face powder, and at least one cream, desire and would like to possess and use perfume. They have seen these women use perfume during the war.

The problem of the industry, and particularly the perfumer, is one of economics and in the sense of preserving the wanted intangibles in perfume, of marketing.

There is no too forbidding reason why the industry should not solve this problem. Their has never been a lack of ingenuity, vigor and imagination before in meeting problems in this industry.

MOLECULAR DISTILLATION Part II

By MORRIS B. JACOBS, Ph.D.



It was explained in a previous article that molecular distillation is the process in which a material is heated between a parallel evaporator and condenser, the gap between the two being held under high vacuum. In general a much broader interpretation is applied in the literature.

It was also explained that by holding a high vacuum between the evaporator and condenser, the mean free path of the molecules being distilled can be increased so that those molecules having sufficient energy can complete the jump to the condenser.

The principal molecular still types are the falling-film devices and the centrifugal types of apparatus. These have been developed into types used on a commercial scale. One of the simplest stills used on a laboratory scale is a tube held in an almost horizontal position and heated gently at the closed end where the distilland is placed. The tube is kept under vacuum and the distillate condenses at the front end or the relatively cool portion. In some more complicated devices, the heat is controlled throughout the length of the tube so that a type of fractional distillation can be obtained. The distillate or sublimate can be scraped from the different sections of the tube.

Other laboratory types are analogous to the devices which will be described as used on a commercial scale. To obtain adequate results on a commercial scale, a uniform thin film of completely degassed oil must be moved turbulently and continuously in close proximity to a relatively "cold" condensing surface. The gap between the film of material being distilled and the condenser must be kept under vacuum of the order of one-millionth of an atmosphere, that is, at about 0.001 mm. Hg. Actually the condensing surface is cool in a relative sense to the portion being heated for hot and even boiling water may be used to cool the condenser. Keeping the condenser at a given temperature serves to make it reject the materials known as semicondensables which, in commercial devices, may be collected with a very cold separate condenser.

In the falling film device, the material being distilled is permitted to flow down the outside of a vertical tube which is heated by an interior element. The molecules of the product being distilled are heated as they flow down the exterior of the tube and vaporize. They travel to a condensing surface which is about one inch away and is concentric with the heating surface.

This type of device has an efficiency known as one theoretical plate. To increase this efficiency, the column may be divided into a number of sections by means of concentric distributors which have opposite them condensing collectors. Assume that the column is divided into three sections, that is, there are three distributors with their corresponding collecting rings. The material being distilled is introduced into the bottom distributor and passes down the bottom section. The distillate is collected from the ring at the bottom section and is pumped up to the distributor next to the bottom, and passes down the middle section of the column into the bottom distributor and down to the bottom section of the column. The distillate collected in turn from the ring opposite the lower portion of the middle section is pumped to the top of the column and is allowed to flow down the entire column. The distillate collected from the ring opposite the lower portion of the tops section is recovered as the final distillate. Such a column is considered to be equivalent to three plates.

In still another modification of this type, the material to be distilled is introduced at the top of the column and the distillate collected by a ring around the condenser opposite the lower part of this section. The undistilled material passes on to the second part of the column, is heated at a higher temperature, and the distillate from this portion is collected. This process may be continued.

The falling-film type of devices have several disadvantages which have affected their commercial exploitation. Those which are merely larger models of laboratory devices lack compactness. The oils distilled in these devices are usually very viscous, hence an appreciable amount of time is consumed in traveling down the vertical tube and therefore the material is subjected to a heating period longer than is desirable for this type of distillation. Because such films are viscous, the thickness of the film is sufficient to increase the time that a molecule takes to travel from the interior to the exterior surface of the film. Thus it takes longer for the desirable portion to evaporate. Finally the thickness of the film markedly decreases the turbulence and this in turn decreases the probability that a given molecule will reach the surface and evaporate.

Some of these disadvantages have been overcome by

THE THERMAL HAZARD OF SHORT-PATH OR MOLECULAR DISTILLATION IS VERY LIKELY LESS THAN THAT OF ANY OTHER METHOD OF DISTILLATION.

including series of redistributors along the length of the vertical distilling column, as described above, and in others the column has been given a spiral surface so that a more uniform film thickness is obtained. Nevertheless the modifications made in the falling-film devices have not overcome their inherent disadvantages.

Nearly all of the disadvantages mentioned for the falling-film type of apparatus have been eliminated by subjecting the films to centrifugal forces, that is, to forces greater than the force of gravity. In the general application of these devices, the material being distilled is fed to rotating disks or plates. The material forms a film on the plates or disks which travels to the periphery and is discharged there. The thickness of the film can be regulated by regulating the speed of rotation. If the disk is heated, volatile material will be evaporated from it and can be condensed on a closely proximated surface above it. The condensed material in some of these devices can also be whirled to the periphery and then collected.

In such devices the films are of the order of 0.01-0.1 mm. in thickness as compared with a thickness of 0.2-1.0 mm. in falling-film types of apparatus. The whirling plates produce a turbulence which is very favorable to the evaporation of the distillable material. The product being distilled may be heated before being introduced on the spinning disk or the disk itself may be heated.

To achieve compactness, to obtain greater speeds, and to permit other arrangements which are advantageous the most intensive development has been given to the cone-shaped centrifugal still within the past few years.

Cone stills have been described by Hickman (Industrial Engineering Chemistry 39, 686 (1947)). They are suitable for handling heavy chemicals and oils in quantities of 50 to 250 gallons per hour per unit, in 5-foot centrifugal stills. The evaporator is a highly finished aluminum casting in the shape of a flower pot which rotates on a vertical shaft in a bed of Calrod electrical resistance heaters. The sides of the evaporator slope upward at an angle of 10-25 degrees. Very good thermal contact is obtained with this still and a high turbulence. The distilland enters at the base of the flower pot through a pipe which points in the direction of rotation at a speed, controlled by the nozzle diameter, equivalent to the peripheral speed of the rotor. The distilland flows up the hot sides of the rotor and passes over the top into a gutter from which the undistilled residue passes to a pump outside the still.

The verticla leaf condenser, made of sheet aluminum, and cooled by hot or even boiling water, is hung within the rotor from stationary supports at the top of the still. The leaves of the condenser are inclined to meet the molecules evaporating from the distilland. The desirable portion of the distillate condenses almost completely on these leaves while the semi-condensables are rejected and are condensed by a center coil which is cooled with cold water.

This type of still also is equivalent to one theoretical plate. Actually the separations are 0.80-0.95 of the optimum but better separations can be achieved by various expedients. The simplest is to enrich the feed with a portion of the distillate, that is, to utilize a partial reflux.

A succession of stills can be employed in which each distillate is passed back to the feed of a previous still or some other sequence can be employed. Some of these sequences are similar to those used in crystallization. Such treatment is termed multiple redistillation.

An additional method for improving the efficiency of molecular distillation is to employ a system of fractionation. One method is to hang a wire mesh screen or gauze between the evaporator and condenser. The gauze condensate falls into the rotor and thus provides a reflux action.

Integral redistillation, which is actually a variation of multiple redistillation utilizing a single still, can be secured by returning the condensate directly to various portions of the rotating flower pot. The distilland instead of being admitted to the bottom of the evaporator is introduced part way up the cone and travels upward to the gutter. The condensate from this distilland drips off a condenser to a lower portion of the evaporator and begins to climb upward to the mother distilland. The condensate from portion 2 drops onto portion 3 of the evaporator rotor and climbs upward to portion 2, and so on.

Centrifugal stills originally were introduced in 1939, the major type being one foot plate stills. Conical stills were introduced first in 1941 and the 5-foot stills in 1945.

The usefulness of these devices has been greatly expanded in less than a decade and at the present time molecular stills are being used for the separation and purification of many items utilized by the drug and cosmetic industry. For instance such stills are used for

(Continued on page 699)

POLITICAL MARKETS

THIS has been a jittery year for the buyer. Seldom have so many diverse and unrelated factors provided such a barrier for cool, informed opinion.

The buyer has had to consider inventory problems in his own company. At the same time he has seen precipitate declines in many commodities, some of which he has been convinced do not reflect true future markets.

The market today is ruled by three general forces. The first of these forces is the age old principle of supply and demand, including the effect of rainfall, tornados, labor, etc. which for years largely determined price and supply. The second force is the disorganization that follows every war—lack of shipping, destruction of facilities and inland transportation, deterioration of plantations and so forth. The third force, more unpre-

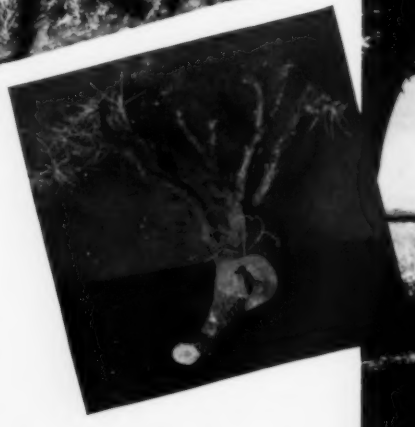


Figure 1. Mysore State Sandalwood Trees. Courtesy Fritzsche Brothers, Inc.

Figure 2. Lemongrass Under Cultivation in Florida. Courtesy U. S. Sugar Co.

Figure 3. Java, Source of Cananga Oil. Perfumery and Essential Oil Record.

Figure 4. Sudan Gum Tragacanth. Note Exudation of Gum From Side of Branch.

Figure 5. Natives Picking Jasmin in Beautiful Grasse Region of Southern France.

dictable than the others, is the influence of politics on economics.

Fortunately for American buyers of imported commodities, there has been a world-wide avid hunger for the dollar, or rather for the goods the dollar can buy here. This straining for the dollar has overcome many difficulties in gathering and transporting goods. Dollar hunger is a potent force that will stimulate exports of these natural materials as long as America produces the fabricated materials and food the rests of the world needs.

There is an even more important advantage fortifying the position of the buyer today. He has an infinitely more flexible position, in regard to nearly every imported raw material, than he had before the war. The war produced many excellent syntheses, many suitable substitutes—even excellent substitutes for substitutes.

Figure 6. Harvesting Digitalis at Sharpe & Dohme Farm in Ridgeway, Pennsylvania.

Figure 7. Indian Natives Sorting and Grading Gum Karaya. Far East is Only Source.

Figure 8. Citronella Oil Factory In West Java Operated by Chinese Firm.

Figure 9. Picking Fruit in Italian Citrus Grove. Courtesy Fritzsche Brothers, Inc.

Figure 10. Cananga Collector With Rod and Haversack. Perfumery and Essential Oil Record.

And many materials that were the monopoly of a country or an area are now produced in volume in other parts of the world.

American buyers may want many of the essential oils, botanicals or raw material products that are favored by the soil, climate and economics of a certain area. But for most of them they are in a position to set a price ceiling on their desire.

This article is not an attempt to interpret political or economic conditions in the countries which are the primary producers of imported natural materials used by this industry. These conditions are too complex and they are subject to too rapid changes. Instead, we list a brief summary of the more important materials, and their economic status in those countries where political conditions may at any time outway economic forces in influencing price or supply.

China: Cassia and Anise

There is no other source for these two important essential oils.

Cassia is in ample spot supply and there has been no interruption in trade. Replacements have arrived regularly as needed. Cassia has dropped steadily in price from a high of $16.00 a pound at the end of the war, to a current level of around $2.15 a pound.

If supplies of Cassia should be shut off or limited, Cinnamic Aldehyde is a satisfactory substitute. There are ample supplies of Cinnamic Aldehyde from domestic sources to meet all requirements and production can be increased if necessary.

The price of Cinnamic Aldehyde is considerably below that of Cassia Oil. During the war there was a consumer shift to this aromatic chemical and some large users still find it advantageous to continue its full or partial use as replacement for the imported Cassia. As a result of these war lessons, the demand for Cassia, at least in grades as we have for many years received from Honkong, has been permanently affected.

Anise oil is also in ample supply, but with limited demand. No interruption of supply is anticipated. The spot price has dropped to 75c a pound.

Anethol is a satisfactory substitute for Anise. It is now manufactured here from a derivative of pine oil. It is available in ample quantity at about 60c a pound.

Russia: Coriander, Clary sage, Pine Needle Oil, Peppermint, Geranium.

Russian oils are offered to this market through the Amtorg Trading Corp. Usually these prices are below offers in other countries. American exchange used to purchase materials in this country can be sold at such high prices in satalite countries that this form of barter is very profitable.

Spasmodic offerings of oil from Russia puzzle the trade. Also a frequent insistence in selling one large bulk lot to a single purchaser.

Coriander is very scarce on spot. It was formerly an important product of Hungary and Austria and seeds found a primary market here for flavoring gin. 'It is probable that the production of food has restricted Coriander planting.

Pine Needle Oil, while scarce, is not in such short supply as Coriander. It is not as important as in prewar markets. Pine Needle bath preparations have been declining and there are substitutes which give satisfaction. Canadian Fir is an excellent substitute. It is in ample supply and easily replaced in the primary market.

Clary Sage is an important oil which seems to originate only in Russia. It is a valuable constituent in lavender compounds.

Peppermint Oil has not been offered by Russia since the war. However, American production last year was the largest on record. Because of continued high prices for peppermint, production this year is expected to increase and American peppermint oil should be sufficient to meet world requirements. The tariff on peppermint oil is an additional factor in protecting domestic requirements.

Russia appears anxious to trade her surplus raw materials with this country. Unless political conditions on the international scene change too drastically for the worst, Russian oils and those from satellite countries will find their way here as cultivation and production is restored.

India: Sandalwood, Lemongrass, Gum Karaya

Sandalwood Oil has long been a monopoly of Mysore Government. Its previous primary use in medicine has largely declined because of the Sulpha drugs. Its use in perfumery is not large although it has a desirable note for some compounds, particularly in soap. Australian sandalwood, different botanically and with a somewhat different note, is available.

Lemongrass was formerly produced mainly in India. During the war an extensive mechanized planting was established in Florida, but was later discontinued. However, in Central (Guatemala especially) and South America, plantations fully mechanized, have proved a great success and are said to be entirely adequate to supply our needs should shipments from India cease. Some lemongrass is available from Africa. The price of lemongrass has dropped one-third since the war and is now at $1.25 to $1.30 a pound.

Karaya Gum is inadequate supply and shipments arrive regularly. Other natural gums from other sources can usually replace Karaya.

Italy: Bergamot Oil, Lemon Oil, Orange Oil, Jasmin and Neroli.

A good supply of Italian citrus oils have been arriving in this country. Preceding the elections, shippers have been loath to refuse bids from importers.

Bergamot is an Italian monopoly. Despite reported efforts during the war to establish the bergamot tree in South America, it still retains an exclusive preference for the Reggio Calabria area of Italy. Bergamot is a distinctive pleasant odor much preferred in classical colognes, men's toiletries odors, soap and in other compounds. Some excellent simulations or synthetic bergamots were produced during the war, but their use has

(*Continued on page 700*)

HOUSE-TO-HOUSE COSMETICS

DAGGETT & RAMSDELL has announced that the Fuller Brush Company will distribute the Debutante line of cosmetics. The products associated with the Daggett & Ramsdell name will not be included in this distribution arrangement with Fuller Brush, but will be continued in retail distribution as before, with a new advertising and promotion program.

Debutante was launched by Daggett & Ramsdell about two years ago with an impressive fashion show and an opening in a Fifth Avenue department store. It was a limited line of cosmetics, promoted to appeal to an age group said to include from 18 to 26 years of age.

The Fuller Brush Company has been long established in the most difficult method of distribution—house-to-house sales. The successful technique which they have developed for a household utility, employing men agents who devote full time to this selling and who have in addition to their home calls, a substantial industrial market, garages, stores, factories, etc., is a radically different technique than the one used by the leader in this method of selling cosmetics.

Our understanding is that the Fuller Brush Company does not intend to have its brush salesmen demonstrate cosmetics. The Debutante household visitor will be a woman, carefully trained in cosmetic selling. There is no question but that Daggett & Ramsdell has the experience to help organize such training. The objective is 20,000 such trained, female sales agents.

House-to-house selling has produced what is probably the largest organization in the cosmetic business, one of the most profitable and certainly the most resistant to business declines. The steady growth of this company over a period of sixty years has many times persuaded companies in and out of the industry to seek a place in this method of selling.

The sales methods of Avon-Allied and Fuller Brush have radical differences. Each have developed a successful technique, particularly in that one critical part which is usually the downfall of all who try this method —securing, training and holding good agents. It will be interesting to watch the evolution of a new technique. It is interesting also to speculate on what would be the relative selling power of 20,000 full-time agents against 45,000 part-time ones.

It is our understanding that Daggett & Ramsdell will retain retail distribution for Debutante. Some stores, already approached, have agreed to continue selling the line, side by side with the Fuller saleswoman. Our own recollection does not include any case where retail distribution has paralleled house-to house-selling. It is a challenging theory and, at least in theory, holds some potent possibilities.

The cosmetic business will readily admit that the cosmetic demonstrator, paid by the manufacturer and stationed behind the retail counter, has had an influence on cosmetic selling that goes far beyond the single retail store in which she is located. This is really the basic justification for the demonstrator and is the real conception behind the distribution policy of Coty, Arden and many other companies. As the demonstrator through skilled selling builds a clientele for her company's products, these women by example and word-of-mouth advertising interest and influence many other women to use these same products. These women, including the clientele directly influenced by the demonstrator, shop freely in many stores within a community. In all of these stores, the sale of the demonstrator's products are stimulated as this kind of educational selling progresses.

We have been accustomed to thinking of the cosmetic demonstrator as a saleswoman who must only be found behind a retail counter. But Revlon, in the first dynamic years of its growth, proved otherwise.

More than ten years ago, Revlon, in its advertising pages in "Beauty Fashion," developed the conception that treatment in the beauty parlor was in fact a demonstration of a commercial branded product that was creating a substantial consumer demand for the retailer to cash in on. The headline of one of these early advertisements claimed many thousand demonstrators in beauty parlors and called on department stores to furnish a retail package for the women these demonstrators were selling. The stores did stock and did find a demand. Interestingly, the growth in sales of this product worked both ways—for both retailer and beauty parlor.

It is not beyond the bound of reason to say that the house-to-house agent and the retailer, particularly the metropolitan retailer, can work in harmony and mutual benefit. The agent can receive great benefit from the confidence and prestige which a select retail distribution will give to a line, and no metropolitan retailer should close his eyes to the effect on consumer interest of a staff of travelling demonstrators working in the homes.

Both Sears-Roebuck and Montgomery Ward have found that an extensive retail development in large urban and suburban centers is compatible with their vast mail order business. Each must unquestionably fortify the other.

Why not then a similar partnership of selected retailers and an extensive house-to-house system.

COSMETICS Functions and Formulations

HAIR PREPARATIONS

By HARRY HILFER

One of the greatest problems confronting the well groomed man or woman has been to find a means to keep the hair in place after it has been combed and set in the morning without frequent recourse to the use of a comb during the day. The hair grooming preparations on the market all serve that purpose, though the method by which they are formulated are so varied that there does not seem to be much similarity. All hair groomings contain in common an agency whose function it is to cause the individual hair strands to cling to each other and therefore to be fairly impervious to the ravages of the wind or other disturbing factors. The agencies, themselves, may differ as does the vehicle containing them, but for successful performance they all have this characteristic in common.

Hair groomings are not new. They have been in use for many centuries. Goose grease used to be a continental favorite, while in the Pacific Islands cocoanut oil, previously treated with floral petals, served as hair grooming aids. Oils and fats are still in fairly common use, with certain refinements, and petroleum distillates such as mineral oils and petrolatums have been added to the list, since they were made available by the highly technical advances made by the petroleum industry.

PHILIP GENDREAU

In addition, aqueous vehicles in which gums such as quince seed, karaya and tragacanth are used have appeared and are in fairly common use.

Oils, fats and petroleum derivatives, used without any diluting medium, were popular during a period when the fashion trends dictated that the hair be oily looking and glossy, but our newer conception of fashion now demands a more natural appearance. This could be obtained by the use of a smaller amount of the dressing, but then the consumer was faced with the difficulty of spreading the smaller quantity evenly throughout the hair, which was not easy. A simpler method was by incorporating the oil into a volatile solvent which would evaporate after application leaving the smaller quantity of oil more thoroughly dispersed. Among the first of this type of preparation was the castor oil-alcohol solution. Castor oil was chosen because it is the only natural, cheaply available oil which is soluble in alcohol. This type of preparation was an impressive success and quickly assumed leadership in the market, and with the exception of the aqueous gum preparations remained by far the most popular of the hair dressings. With the advent of the war however came acute shortages of both alcohol and castor oil and therefore other methods were investigated and found whereby oils could be dispersed through a volatile vehicle. Outstanding among these have been the emulsion types of groomings where the oil was incorporated into a water-in-oil emulsion where the water served as a volatile diluent, by acting as a carrier in much the same fashion as alcohol in the alcohol-castor oil solution. There are in addition oil-in-water hair grooming preparations where the percentage of the oil is smaller than in the water-in-oil emulsion.

Another popular type of hair grooming are the products which appear as a two phase system containing oil resting on the surface of the water, but which are capable of forming rather a weak emulsion on shaking the bottle before application. This type is the forerunner of the emulsion type of preparation but where a smaller amount of emulsifier was used to produce the desired result. These different preparations will all be discussed in their turn.

The mucilaginous groomings have been popular for a long period of time and there is still a good demand for them. Any of the well known gums may be used in

their preparation and this list includes karaya, quince, tragacanth, locust bean and arabic among others. There seems to be a preference towards the use of quince because apparently a smaller quantity of it produces an adhesiveness equal to larger quantities of the other gums. The smaller quantity used therefore does not make itself as evident after evaporation of the water as a white flaky sediment resembling "dandruff." All of these substances are capable of forming "glycerites" when reacted with glycerol, with an accompanying thickening of body which is sometimes utilized for control of the viscosity of the finished preparation.

The pH of the finished preparation also has a marked influence on the viscosity, generally the alkaline suspensions being more viscous than the neutral or slightly acid types. Borax is therefore used in conjunction with these gums if a more viscous solution is desired.

Perhaps the greatest difficulty accompanying their use is the difficulty in preserving them against moulds and bacteria. There are several excellent anti-mould and anti-bacterial agents available however which are capable of preserving them against these organisms. The para hydroxy benzoate esters have enjoyed good success as have several others sold under brand names. In practice it is best to use a higher percentage of the preservative in mucilaginous suspensions than would otherwise be necessary because they make so good a food for the microscopic organisms.

Methods of preparation vary with the gum used. Quince seed is perhaps the most difficult to process, because the seeds must first be soaked in water for a period of at least 24 hours so that the mucilaginous component present in the hulls may be extracted and the aqueous portion separated from the seeds. This may be accomplished by a number of methods, the easiest being by passing the aqueous mixture through a screen which removes the seeds. There are small brownish specks present however which are too small to be removed by screening and the suspension is therefore centrifuged to remove all traces of these impurities.

The seeds are usually treated with water at room temperature, since at elevated temperatures there is likely to be some color bodies dissolved in the water, giving it an undesirable brownish tint. The higher the temperature the greater would be the amount of these and other impurities dissolved, which do not help the adhesive quality of the mucilage. Quince seed, unfortunately, does not run uniform in the adhesive quality of its mucilage from batch to batch and a close control must therefore be kept on the raw material so that compensation may be made to insure a uniform final product. The control is usually kept on the amount of suspended material extracted from the seeds as well as the viscosity of the mucilage.

The number of operations required in the treatment of quince seed has caused a widespread usage of other gums, chiefly karaya and tragacanth. Both of these are in fairly common use and mucilages made from them are not as difficult to process as is the quince, since they come in a form which is readily suspended in water without any necessity of making a separation from any seeds or from any other undesirable impurities.

The emulsion types of hair dressings as mentioned above are both water-in-oil and oil-in-water emulsions, water-in-oil being the more popular. Their advent was made possible by the commercial introduction in recent years of synthetic emulsifiers which may be synthesized almost to fit any specific purpose. Until their advent water-in-oil preparations of the mobile type were difficult to prepare because none of the then existing materials were capable of forming a stable emulsion of the water-in-oil type. The sorbitan esters particularly have been used successfully and at least one of the newer water-in-oil emulsion dressings owes its stability in part to the use of sorbitan sesquioleate. A small amount of beeswax with a stereochemetric amount of borax helps stabilize the emulsion and the addition of an absorption base forms a product which is capable of good commercial stability. Mineral oil is the substance usually used as the prime grooming agency though there are now some products of this type appearing on the market where fixed oils are used.

A fairly typical formulation of the cream oil hair dressing would contain

Mineral Oil	—22.2%
Sorbitan Sesquioleate	— 2.5
Alcolan	—15.0
Beeswax	— 5.0
Borax	— 3.15
Water	—55.0
Preservative	—qs.

The viscosity of these emulsions may be governed by the amount of water added—the greater the percentage of water, the greater would be the viscosity.

The oil-in-water dressings contain a much smaller amount of oil and a larger percentage of water. The emulsifier is usually a soap or other anionic agent such as sodium lanyl sulfate. Here the oil content is usually about 6-10 per cent.

In the last type of oil grooming included in this paper there is a complete separation of oil and aqueous phase, which is capable of being formed into an emulsion by agitation due to the presence of a small amount of an emulsifier without there being present any auxiliary agents to aid in stabilization. The use of quaternary ammonium compounds has recently been initiated in this connection because they are capable, in addition to their function as emulsifiers, of strong germicidal activity which may guard the scalp against functional deficiencies due to bacteria.

Cationic agents in general (of which quaternaries are members) because of the positive charge the long chain member of the molecule possesses are utilized in another type of grooming in no way related to the products already discussed. The keratin molecule in the hair has a negative charge and therefore reacts readily with the cationic substance causing a substantive effect. The addition is evidenced by producing a silkier "feel" to

(*Continued on page 699*)

Cellulose Derivatives in

By M. A. LESSER

CELLULOSE derivatives have become raw materials of tremendous commercial importance. To appreciate the status of these substances it is necessary only to mention the modern rayon, transparent wrappings and lacquer industries. Aside from such major uses, certain cellulose derivatives have found valued applications in other industries, including drug and cosmetic production. Though other compounds are sometimes employed, three cellulose ethers are of particular significance in the drug and cosmetic industry. These are methyl cellulose, carboxymethylcellulose and ethyl cellulose. The first two are water-soluble compounds valued as replacements for natural gums. The third, requiring the use of solvents, is employed chiefly because of its film-forming properties.

The best known and longest used of these ethers is methyl cellulose. With many applications in drug and cosmetic formulation, it is available in this country under such trade names as "Methocel" and "Colloresin" and, in Europe, as "Tylose." Its value in pharmaceutical products is well indicated by the fact that a monograph on methyl cellulose is included in the first supplement to the National Formulary VIII.[1]

The production of methyl cellulose follows the usual methods for making cellulose ethers. Cotton or wood cellulose is converted by strong sodium hydroxide solution to alkali cellulose which is then methylated with methylchloride. Temperature control in the process is important to avoid cellulose destruction or degradation. The degree of esterification of the cellulose determines the properties of the final product. Methyl cellulose is regularly produced in several viscosity types to meet a wide range of application requirements.[2] Methocel, for example is produced in six viscosity types and there are seven viscosity grades of Colloresin.

Methyl cellulose is available commercially as a white, fibrous product similar to cotton linters in appearance. Neutral, odorless, tasteless and inert, methyl cellulose is stable to heat, light and aging. It produces clear, colorless aqueous solutions which ordinarily do not require a preservative and which retain their viscosity over a wide pH range. Methyl cellulose is compatible with dilute acids, alkalies, most water-soluble resins and wetting agents and its aqueous solutions or dispersions are compatible with most water-miscible organic solvents. Aqueous solutions can be diluted infinitely with alcohol without precipitation. However, methyl cellulose is insoluble in most of the common organic solvents.[3]

Since it is used in both therapeutic and cosmetic preparations, it is important to know that methyl cellulose is safe to use. According to Bergy,[4] solutions of methyl cellulose are "completely harmless" to man when applied internally or externally. Since the substance is resistant to marked pH changes, it is not decomposed by the stomach's acid reaction nor by the alkalinity of the intestines. Laboratory experiments have shown that animals can be maintained in a healthy condition on diets containing large quantities of methyl cellulose. It was also found that when methyl cellulose was administered in a single 10 Gm.-dose to human subjects practically all of the methoxyl injected could be recovered from the feces. No ill effects were noted in any of the subjects.[5]

Methyl cellulose is used in the cosmetic and pharmaceutical industries principally as a binding, thickening, dispersing, emulsion-stabilizing and film-forming agent. Methyl cellulose has sometimes been described as a replacement for natural gums like tragacanth, acacia karaya and others. The cellulose ether, however, is in many respects superior to the natural products. These advantages have been summarized[5,6] as follows: (a) Methyl cellulose is a uniform synthetic chemical product, (b) It is completely soluble in water and contains no dirt or foreign material, (c) Its solutions ordinarily require no preservatives, (d) The solutions are entirely neutral; this being in contrast with the acid reaction shown by most gums, (e) The solutions remain clear and colorless over a wide pH range, and, (f) The material is compatible with a wide variety of substances and its solutions are stable; retaining their viscosity under a wide range of conditions.

Methyl cellulose forms solutions, pastes and jellies only in cold water. However, it is wet out more rapidly and easily by first mixing the material thoroughly with about half the required water at boiling temperature, and allowing it to soak for twenty to thirty minutes with agitation. The remaining water may then be added, either as cold water or as ice. The mixture is then cooled to room temperature and stirred until smooth. Methyl cellulose solutions of maximum clarity are obtained by reducing the temperature to 5° to 10°C. during the cooling period. Methyl cellulose solutions may also be prepared simply by stirring in water at room temperature. The initial hot water treatment, however hastens dispersion and prevents the formation of gel lumps: while the cooling procedure insures the preparation of haze-free, colorless solutions.[3]

The viscosity type of methyl cellulose selected will depend on the properties desired in the final solution. The low and medium viscosity types of methyl cellulose are used where high solids content and low viscosity solutions are needed. The high viscosity types are found suitable in applications where viscous solutions are desired with a minimum content of methyl cellulose.[6]

tives in Drugs and Cosmetics PART I

In addition to its use in the production of simple solutions, methyl cellulose is an efficient emulsifying agent; acting as a protective colloid for many types of dispersed substances. When oils, paraffins, fats and waxes are emulsified with methyl cellulose, emulsions of the oil-in-water type are produced, which are noteworthy for their fine appearance and great stability. Oils are emulsified cold, but solid substances are first melted and stirred into the methyl cellulose solution previously warmed to the same temperature; stirring is continued until the preparation is cool.[4,7]

Methyl cellulose has proved useful in the formulation of a great variety of toilet products and therapeutic preparations, including hair dressings, deodorants, depilatory pastes, facial masks, lotions, hand and face creams, protective ointments, dermatologic preparations, burn films, dentifrices, colloidal laxatives and even blood substitutes.

Deakers[8] has pointed out that solutions of methyl cellulose properly plasticized with glycerine form effective waving fluids. Methyl cellulose, he said, can also be used to advantage in permanent waving fluids where the pH of the solution is not greater than 12. When so employed, it will assist in maintaining emulsion stability and its gelling effect should be of advantage in forming the permanent. Illustrative of its employment in hair preparations is the use of methyl cellulose in the following oil-containing hair fixative:[7]

Liquid petrolatum	**25.0 parts**
Alcohol	**10.0 "**
Methyl cellulose (4,000 cps.)	**2.0 "**
Distilled water	**63.0 "**

Considered[9] an excellent bodying and binding agent for depilatories, a formula for an acceptable depilatory cream has been given[4] as follows:

Barium sulfide (yellow)	**35.0 parts**
Titanium dioxide	**10.0 "**
Glycerine	**15.0 "**
Rose perfume	**2.0 "**
Methyl cellulose, 5% solution	**38.0 "**

These properties, as well as other qualities of methyl cellulose, may be employed in the preparation of liquid face masks which dry to a tight, varnish-like film. The following mask dries in about twenty minutes after it has been brushed on, and it can be peeled off if desired:[9]

Methyl cellulose, low viscosity	**10 parts**
Sorbitol syrup	**5 "**
Kaolin	**3 "**
Water	**82 "**

A sufficient quantity of perfume, color and preservative is also incorporated. Although methyl cellulose solutions do not support mold growth, a preservative is sometimes required because there may be other components in a product which do encourage molding or bacterial spoilage. If appropriate tests show that a preservative is not needed, it is, of course, an advantage.

In Deaker's[8] opinion, mascara manufacturers will find methyl cellulose an ideal material for their purposes. Through its use, and with the proper amount of plasticizer, a much superior product can result.

In discussing hand lotion manufacture, he stated that methyl cellulose is particularly valuable as a thickening agent. It does not break down and, in addition, has a smooth, unctuous feeling on the skin. The investigations of Osborn and Dekay[10] have also indicated the value of methyl cellulose solutions as vehicles for hand lotions. For instance, in comparative tests with natural gums and other thickening agents, a 5 per cent solution of methyl cellulose of the 15 centipoises (cps.) type yielded "very good" results as a vehicle for the translucent type of lotion. A 10 per cent solution of the same type of methyl cellulose yielded a thick product, whereas a thin lotion resulted when 1 per cent of methyl cellulose of the 1500 cps. type was used.

The usefulness of methyl cellulose was also shown by the work of Clemens and Read[11] in Australia. Among other products, they developed the following formula for an almond lotion:

Almond oil	**10.0 cc.**
Methyl cellulose (Tylose SL400)	**1.5 Gm.**
Alcohol (90%)	**7.5 cc.**
Oil of bitter almonds	**0.2 cc.**
Oil of geranium	**0.8 cc.**
Water, to make	**100.0 cc.**

Also significant is the use of methyl cellulose in a special lotion having an acid pH. After considerable experimentation, Avis[12] selected the following formula as the one yielding the best results.

Lanolin, anhydrous	6.4	per	cent
Liquid petrolatum, heavy	8.8	"	"
Sesame oil, N.F.	1.1	"	"
Corn oil	1.1	"	"
"Emcol MS-16"	2.0	"	"
Methyl cellulose (400 cps.), 2% mucilage	20.0	"	"
Propylene glycol	20.0	"	"
Water	40.6	"	"

This lotion, after passage through a homogenizer to produce a smooth emulsion, had a pH of 3.6 and was stable after a year. In the opinion of Avis, the non-irritant character of the product as well as its composition would suggest its usefulness as a baby lotion. With suitable modifications, it should also be adaptable to other dermatological preparations. (Emcol MS-16, a mixed emulsifier, is made by Emulsol Corp., Chicago 3, Ill.).

Other types of skin preparations may also benefit from the use of methyl cellulose. For example, a useful formula for a skin cream is given as follows:[2,4]

White petrolatum	40.0
Glycerine	5.0
Methyl cellulose	2.0
Perfume	1.0
Distilled water	52.0

A good hand cream, which is not too tacky and which does not leave a greasy surface, may be prepared from:[13]

Methyl cellulose, 5% solution	25.0
Glycerine	15.0
Olive oil	4.0
Stearyl alcohol	2.5
Tincture of benzoin	2.0
Distilled water, to make	100.0

Melt the stearyl alcohol, dissolve in the olive oil and then add the cellulose solution, glycerine and some of the water, with stirring. Run through a homogenizer add the benzoin tincture and bring to the requisite volume with water.

Occasionally similar compositions are described in patents. For example, a paste suitable for treating and refreshing the skin may be prepared from methyl cellulose, vegetable gelatin, glycerine and water, with or without appropriate additions like a pigment, a wax, or a perfume.[14]

Methyl cellulose is believed to exert a cleansing action and, as noted by Harry,[15] should therefore be of interest in formulating cleansing creams. An example of its utilization in a vanishing cream, as given by this English authority, is as follows:

Stearic acid	20.0	per	cent
Triethanolamine	2.0	"	"
Cetyl alcohol	0.8	"	"
Water	60.2	"	"
Methyl cellulose, 4% solution	17.0	"	"

A skin cleansing cream, which closely resembles a casein rolling massage cream, may be prepared from:[4]

Methyl cellulose	15.0
Alcohol	5.0
Glycerine	6.0
Lanolin, odorless	0.3
Alkyl parahydroxybenzoate	0.2
Distilled water	74.0

Solution of the methyl cellulose is affected after dissolving the methyl or ethyl parahydroxybenzoate (preservative) in the water. The other ingredients are then incorporated, perfume and color being added as desired. The product should be worked to perfect homogeneity.

Of related interest is the use of methyl cellulose in the preparation of so-called waterless cleaners. There appears to be a revived demand for these products which are designed for use by motorists and others who must clean their hands in places where water is not readily available. A typical product of this type, a paste which is rubbed into the hands until it falls off as dry flakes, is prepared as follows:[7]

Methyl cellulose (4000 cps.)	14.3	parts
Alcohol	5.5	"
Glycerine	5.5	"
Lanolin	0.3	"
Menthol	0.1	"
Propyl parahydroxybenzoate	0.3	"
Distilled water	74.0	"

The thickening, dispensing and film-forming properties of methyl cellulose have made it a valued component of various types of industrial skin protective creams and lotions. It is present, for example, in three of the six skin protective products put out under one well-known brand name ("Fend"). A patented preparation[16] for protecting the skin from paint and the like is based on a combination of methyl cellulose solution, liquid petrolatum and glycerine.

In discussing the formulation of skin protectives, Schwartz[17] of the U. S. Public Health Service mentions the usefulness of methyl cellulose in the production of water-soluble films. These products, sometimes called the "invisible glove" type, provide a certain degree of protection against solvents, such as petroleum distillates, the solvent chlorinated hydrocarbons, and water-insoluble allergens, such as trinitrotoluene and tetryl. An up-to-date formula for a skin protective cream which utilizes the film-forming properties of methyl cellulose has been given[18] as follows:

Stearic acid	15.0	per	cent
Sorbitan monostearate (Span 60)	2.0	"	"
Polyoxyalkylene sorbitan monostearate (Tween) 60	1.5	"	"
Zinc stearate	5.0	"	"
Sorbitol solution (Arlex)	5.0	"	"
Methyl cellulose (4000 cps.) 4% mucilage	25.0	"	"

(Continued on page 670)

Cream Sachets

By HARRY HILFER

THERE has recently appeared on the cosmetic market by three or four companies a new type of product called the cream sachet. As often happens in new cosmetic products, this is not basically new but is an adaptation or rather a deviation of a product that has long been familiar to the cosmetic industry. In addition, the name sachet, for this cream perfume, is definitely a misnomer because it is not a sachet in the classical sense and is not intended to provide the historical function of a sachet. We have an example of this misuse of an old and honored cosmetic term in the way the industry has completely distorted the meaning of the word cologne from its original historical and classical meaning into a completely new and broader definition for a cosmetic term.

The cream sachet is interesting because it is apparently meeting some consumer and retail acceptance. There are reports that one brand is showing rather startling growth in the south, and that two other companies which have recently introduced the product, have found interesting acceptance.

The cream sachet is not an easy product to make. There are technical difficulties which are touched upon in this article. Undoubtedly, if this product holds the apparent promise that limited trials suggest, many variations of cream and liquid will appear on the market, opening up for this industry a real opportunity for the cosmetic chemist to show his technical skill.

THE original conception of sachets were materials to which perfume oils were added and were capable of being placed in a clothes or linen closet so that the pleasing odor could be transmitted to the clothes contained therein. Sachets of this type were made by treating highly absorbent powdered substances with the essential oils and then packaging them in perforated envelopes or fascinatingly designed textile pouches. Packaged in this manner they could be easily placed in closets or drawers.

The "sachet" connotation has taken on a new meaning, however, with the designation it bears towards "liquid" sachets and cream "sachets". We now have highly perfumed preparations in an emulsion form, differing from perfumes in that they are non-alcoholic and are dependent on the emulsion as a carrier for the essential oils. They contain much the same amount of odoriferous oils as do the perfumes, though they need not contain as much of the fixative as is required by the alcoholic preparation, since the oils and waxes in the emulsion cut down the evaporation rate of the aromatic compounds in much the same manner as does the fixative.

Their formulation cannot be said to conform to any one standard pattern since the perfume compounds differ so greatly in their chemical structures that it is best to adopt an emulsion formulation which best fits the substances contained in the essential oil mixture. Emulsions dependent on a soap as an emulsifier, for example, may set up a series of reactions which may cause marked changes in odor character to take place on standing due to the alkaline pH which is characteristic of such preparations. Any such tendencies would have to be watched carefully and circumvented.

The stability of the finished emulsions will also vary with the oils used, since some essential oils are notoriously difficult to emulsify. Indeed, one method in use for testing the stability of certain types of emulsions depends on the ability of one of the essential oils to cause the emulsion to break. The formulator may therefore find that if he had to prepare cream sachets in which a number of different odors were to be used, he would have to prepare an emulsion for each of the odors to be marketed.

Cream sachets are used in much the same manner as perfumes from the standpoint of application and that is by transferring to the areas behind the ears and on the arms. They are said to possess a longer life after application than do the perfumes, but we believe that this statement is open to argument.

It undoubtedly has a greater appeal than does the perfume, from the standpoint of its more viscous and richer consistency and the complete freedom from alcoholic sting which is associated with perfumes. Another possible virtue lies in its being packaged in a jar which many women prefer to use as against a bottle.

We would be interested in seeing whether the cream sachet is a fad or a permanent addition to the perfume shelves. We have heard some quite exciting comments regarding it and are awaiting further developments.

NEW DEVELOPMENTS IN MEDICINAL AGENTS PART III

Mesantoin

Mesantoin is 3-methyl-5,5-phenyl-ethyl-hydantoin, a new anticonvulsant recently synthesized. It owes its activity, of course, to the hydantoin portion of the molecule. It is indicated in grand mal and psychomotor equivalents of epilepsy. Side effects noted include drowsiness and a skin rash but these usually appear with large initial doses. By beginning with small initial doses desensitization may be produced. The average adult dose is 0.2 to 0.6 Gm. daily. This may be increased to 0.8 Gm. or more if necessary. Children usually react to a dosage of 0.1 to 0.4 Gm. The dosage is necessarily adjusted to the individual. Mesantoin (Phenantoin) is marketed by Sandoz Chemical Works.

Irradiation Technic

Vaccines are a problem to pharmacists because of their tendency to deteriorate even at refrigerator temperatures. Ultraviolet irradiation technic has been found to produce a vaccine which consistently induces a high degree of immunity and does not exhibit significant loss of potency after several months of storage. This technic is being applied by Parke, Davis and Co. and the first vaccine to be marketed under this process is rabies vaccine. The term Iradogen has been applied to this group of products.

Sodium Sulfacetimide

Chemically sodium sulfacetimide is N^1-acetyl-4-aminophenyl-sulfonamide. It is very soluble in water and is the only sulfonamide compound which can be used in high concentration at the physiologic pH of 7.4. It possesses high antibacterial activity and is non-irritating to mucous membranes. Sodium sulfacetimide has been used with excellent results in treating eye infections due to *Staphylococcus aureus* and *albus*, pneumococcus, gonococcus, hemophilus (Koch-Weeks) and numerous other organisms. Synonyms for this drug are sodium sulamyd, albucid soluble, and sodium *p*-aminobenzene-sulfonylacetylimide. Sodium Sulfacetimide Solution 30% and Ointment 10% are supplied by Schering Corp.

Sodium Phthalyl Sulfacetimide

Sodium phthalyl sulfacetimide, or disodium N^1-acetyl-N^4-phthalylsulfanilamide dihydrate has been shown to be an actively bactericidal compound with the unique property of being absorbable into the intestinal wall in high concentration although it is unabsorbable in respect to the blood stream. It exhibits the peculiarly low toxicity of compounds of the sulfacetimide series, as compared with the well-recognized toxicity of N^1 substituted sulfanilamides. Since it establishes a high effective concentration at the locus of infection proper, neither reaching it incidentally to a high level in the circulating blood nor approaching it superficially by virtue of simple admixture with the intestinal contents, it would be expected to display exceptional effectiveness in the treatment of enteric infections. It is of clear efficiency in reducing the ordinary bacterial flora, as in preoperative prophylaxis. Although it is not effective on all organisms, and other agents in some cases are more active, this compound has an advantage over the others in that equally effective concentrations can be brought to bear at the exact site of the infection.

Sodium phthalyl sulfacetimide is available in powder form and is dissolved in water for adults or in milk for young nursing infants. No dosage schedule has been developed but it is recommended that it not exceed 0.2 Gm. per Kg. of body weight in 24 hours. Much smaller doses are thought to be effective. It is indicated as a prophylactic in preoperative surgical preparation and as a chemotherapeutic agent in the active treatment of shigellosis and other enteric infections. Sodium phthalyl sulfacetimide is available for clinical investigation from Schering Corp.

Diisopropyl Fluorophosphate

A new drug, developed originally as a chemical warfare agent, has shown great value in glaucoma therapy. Glaucoma is a condition of the eye in which there is heightened intraocular tension. The cause of this disease is not definitely known.

Diisopropyl fluorophosphate, commonly known as DFP, is a powerful inhibitor of cholinesterase. Therefore, it possesses parasympathomimetic and nicotinic actions. In inhibiting the cholinesterase, DFP combines with it and eliminates it from the reaction. This is in contradistinction to other inhibitors which when inhibition is completed, release the enzyme to continue its activity. Administered to the eye, DFP produces prolonged and marked pupil contraction, spasm of the ciliary muscle, false myopia, and a decrease in intraocular tension. No other miotic drug possesses such a prolonged action. DFP is antagonistic to homatropine and atropine. DFP is an oily substance, miscible with

By MADELINE O. HOLLAND, D.Sc.

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oils, and relatively stable in peanut oil. It is not so stable in water. Therapeutically it is employed in concentrations of 0.05 to 0.1 per cent in oil. Although it is not effective in all cases of glaucoma, it is of definite value. Visual blurring, brow ache and eye ache, spasm of accommodation and pericorneal injection may occur as side reactions, thus eliminating its use in certain types of glaucoma.

Some of the uses in which DFP may be indicated are as follows: (1) DFP produces little discomfort in patients with glaucomatous, aphakic eyes, and it appears to be a most effective agent in controlling the tension of such eyes. (2) DFP is able to overcome the pupillary and accommodative effects of atropine. It should prove of therapeutic value in preglaucomatous and glaucomatous eyes unfortunately and inadvertently treated with atropine. (3) DFP may be helpful in controlling the tension in eyes in which operation must be postponed and pilocarpine or physostigmine has proved ineffective. (4) DFP properly may be used initially in relief of acute congestive glaucoma, since it is a more powerful agent than physostigmine. Being an anticholinesterase agent, it is believed that DFP can be used in eye conditions in which physostigmine formerly was employed. Due to its prolonged action, DFP has shown gratifying results in the treatment of postoperative ileus, and possibilities in myasthenia gravis.

Neo-Curtasal

There are many people who must have salt (sodium) -free diets and consequently they are constantly confronted with the problem of seasoning their foods. Several preparations for this purpose have been available for years. Recently a new one has been announced. It is an odorless, white, crystalline, somewhat hygroscopic powder, consisting of potassium chloride, ammonium chloride, potassium formate, calcium formate, magnesium citrate and starch with a taste like sodium chloride. This compound is indicated for salt (sodium)-free diet in cardiac and renal diseases, particularly when associated with edema, hypertension, arteriosclerosis, certain complications of pregnancy, epilepsy and for Gerson diet in tuberculosis. It is supplied under the trade-name of Neo-Curtasal by Winthrop-Stearns, Inc.

Lycoyte Powder

Dried human blood cells when sprinkled in liberal quantity over an affected area, such as in wounds, minor burns and ulcers have been found to stimulate the growth of healthy granulation tissue and serve as a medium for the growth and extension of epithelial cells over the granulating surface. If a crust forms over the lesion with the powder this serves to support the growing connective and epithelial tissue beneath it. The powder which is prepared contains a small amount of residual plasma, the stroma and the contents of the acellular elements of the blood. Human blood cells prepared by the lyophile process are marketed as Lyocyte Powder Dried Human Blood Cells by Sharp and Dohme, Inc. This product is indicated as an aid in tissue regeneration to superficial and deep wounds and lesions such as varicose, decubitus and ischemic ulcers; open lesions of traumatic origin; potentially infected wounds such as second and third degree burns; deep abrasions and irregular lacerations; post-operative wounds, amputations, chest wounds and certain post-operative states.

Chaulmoogra Oil

For years chaulmoogra oil has been the accepted treatment for leprosy. Recently it was announced that this drug in conjunction with streptomycin produced striking results in the treatment of tuberculosis. The chaulmoogra oil dissolves the waxy coating on the tuberculosis bacillus thus making it more susceptible to the streptomycin. Streptomycin alone suppresses rather than kills the organisms and must be given in large doses with the then increasing posibility of toxic effects.

Pyriplex

Nausea and vomiting frequently are unpleasant complications of pregnancy. Many drugs have been used with moderate success in relieving this condition. Recently pyridoxine has been shown to be exceptionally effective despite the fact that the underlying cause of the condition is quite complex and involves physical, emotional and psychological disturbances. Pyridoxine has also been found of value in irradiation sickness.

Pyriplex, marketed by the S. E. Massengill Co., contains pyridoxine hydrochloride, thiamine hydrochloride, riboflavin, nicotinamide, glucose and aromatics in a liquid vehicle. The glucose is included to provide carbohydrate of which there is a depletion and which is a factor in the etiology of the condition. The other vitamins are added to assure proper assimilation of the carbohydrate.

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ANSWERING OFTEN-ASKED QUESTIONS ABOUT

VisQueen*

POLYMERIZED ETHYLENE FILM

and its application to modern packaging

Is VISQUEEN Film flexible at very low temperatures?

Tests show VISQUEEN Film retains flexibility at temperatures as low as 94° F. below zero. This fact makes it ideal for frozen food packaging.

How about strength?

Tear resistance of VISQUEEN Film is definitely superior. In tests, strips of VISQUEEN Film .075" in thickness have been folded double without breaking at minus 112° F.

Is VISQUEEN Film waterproof?

VISQUEEN Film absorbs less than 1/1000 of its weight of water after long immersion. Was used by Armed Services to protect guns and other vital equipment against salt air and water in all parts of the world.

What is VISQUEEN Film's moisture vapor transmission rate?

Extremely low. Moisture Transmission remains extremely low, even when VISQUEEN Film is in actual contact with water on one side.

Is it non-adhesive?

VISQUEEN Film has very dry surface—has no tendency to stick, cling or "block". Items wrapped in VISQUEEN Film may be stacked or packed together without danger of sticking.

Do chemicals affect VISQUEEN Film?

VISQUEEN Film is chemically inert, contains no plasticizer. No active solvent has been found for this film, at room temperature. Unaffected by acids.

Is VISQUEEN Film sealable with heat?

Yes. VISQUEEN Film is a thermoplastic and may be heat-sealed on ordinary bar and roller type commercial sealing equipment with minor adjustment. Details on request. May also be weld-sealed by open flame method.

FIND OUT WHAT VisQueen* FILM CAN DO FOR YOU!

VISQUEEN Film is most economical, non-toxic, tasteless, odorless—has what it takes to solve a wide variety of packaging problems. Comes in variety of thicknesses, from very thin to very thick. Low specific gravity. Non-susceptible to humidity changes. Available in rolls of clear seamless tubing or sheeting in specified widths. For samples and complete information —write today to—The Visking Corporation, Preston Division, P. O. Box 1418 B Terre Haute, Indiana.

PURE
TASTELESS
ODORLESS

VisQueen* FILM

*T. M. The Visking Corporation

A product of The Visking Corporation, Preston Division, Terre Haute, Indiana

PACKAGING and SELLING

THE HEAD HUNTERS

If you want to talk to someone who is really mad, drop into the nearest beauty parlor. The head hunters of the Amazon are no more ferocious than the head hunters of the Avenues, and with good reason. Business is off from 30 to 50 per cent, small shops are going out of business and the future looks none too bright.

The public has been economizing here, as in other consumer goods. But if this were all, the operators could take this part of the loss in revenue in their stride and wait for the better day that is coming.

The trouble is that the home wave kit has reached a swift moving pitch of public interest at a time when economy is a strong feminine emotion. The operators see great significance in the purchase of Toni by Gillette, which some forty years ago caused a revolution in the barber shop by transferring the shave from the shop to the home.

The loss to the beauty parlor lies not only in about a 200 million dollar drop in hair-do's, but another 100 million in shampoos, lotions, dyeing, etc. The home kits are slicing traffic figures to fractions.

All this is a new kind of hair wave in which the beauty operators can see no beauty. It's a wave that hit the manufacturing industry somewhere around 1936 in Minneapolis. Maybe that's why it was called a cold wave.

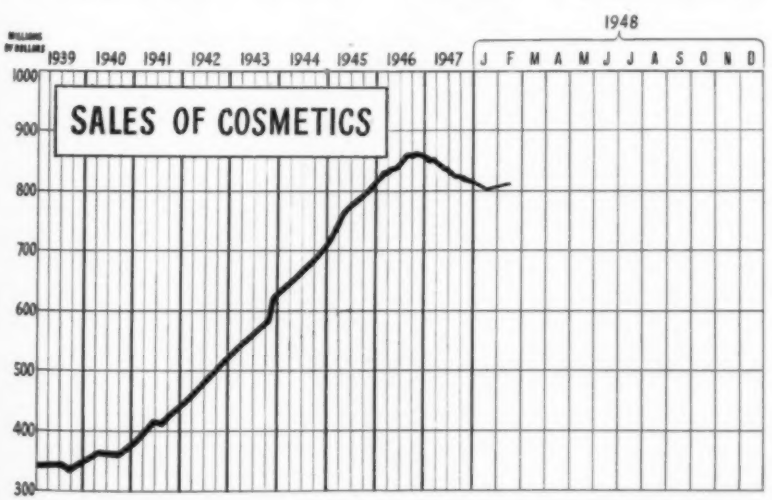
Anyway this new chemical discovery started a ripple which seems to be engulfing manufacturers. Nearly every one seems to be jumping into the hair business. Hudnut, who introduced a hair line last year, is reported to have reached a million dollars on this new line. Even the large retailers are interested. United Rexall and Montgomery Ward have a kit, Macy is said to be working on one. The big soap companies, already committed to hair treatment through the use of synthetic detergents in cream and liquid shampoos, are watching this new market—the biggest new cosmetic market for the retailer for many years. Some estimate this market, i.e. the increase in hair products purchased from retailers, as a 100 million dollar increase over the last five years.

There is an interesting phenomenon in all this pitch of hair excitement. Products for hair care are an ancient part of the industry. Mostly they have been mass selling specialties largely distributed through drug stores at $1.00 and under. The retail trade in these products barely touched the department store. Only two companies, each with a complete line, approached hair care as a full treatment on a department store basis. These companies are Ogilvie and Breck.

Now it looks as if products for hair care will become a major part of the cosmetic industry, ranking with skin treatment. It looks as if class, or prestige products will be prominent in department stores, rate specialized selling and compete for floor and counter space with creams. It looks as if most treatment houses and some perfumers will jump into this field. And there will be plenty, yes plenty, of companies in the drug and variety store field.

The home kit speared the way for this development. But the really effective force has been research and the development of new technical qualities which have vastly improved the effectiveness of such products as shampoos and hair dressings.

The answer of the beauty parlor operator, the jobber and supplier to all this is an organization, (Big) Beauty Shop Industry Group. A 2 per cent voluntary levy on all supplies bought is expected to raise a million dollars a



Retail sales of cosmetics for the twelve months ended with February 1948 amounted to $811,049,000. This compares with $802,704,000 for the twelve months ended with January 1948 and with $849,514,000 for the twelve months ended with February 1947.

year. The appeal, through advertising and promotions, will develop a theme such as "a home wave is like a home made dress—not an expert job."

Probably the outcome of all this fury and fear will be no where near as bad as the beauty operators now think. They should look again at the barber shop—as prosperous today as at the advent of the safety razor—and still ringing up plenty of shaves.

The beauty operators will find new ways of adjusting prices at a profit, and enough women will want professional service at this price.

But, also, quite a few million women, who cannot afford or often afford professional treatment even at a new price, will now have better hair care.

This new advertising of the operators, if it is constructive and convincing and if it is backed by prices the needed traffic can afford, will soon restore their profits and good humor.

If it is the right kind of advertising, it will enormously increase interest in hair care among all classes of women.

By Their Nose You Shall Know Them

It is always a pleasure to spend an evening at a meeting of the American Society of Perfumers. These genial gentlemen, who gather together once a month, have the happy faculty of relaxing in complete and harmonious fellowship.

Many useful objectives are being planned by this Society. We believe that the mere fact of their existence, as a professional society, serves a purpose that is valuable to the entire cosmetic and perfume industry. It is proof that this industry is maturing, that the creative art essential for its expansion has at last found a voice and is at last ready to serve.

The perfumer's art is as old or older than that of the alchemist. The perfumer can trace his professional ancestry to pre-biblical days. For this reason, now that the perfumer in America has left his cloistered bower to appear in public, it may be of some interest to examine this ancient but secluded profession.

All professions have their particular and peculiar characteristics. The editor, traditionally, must have a nose for news. The Perfumer, by the test of professional competence, must have a nose for odors. Lawyers, by certain of their clientele, are called the "Mouthpiece." Perfumers could well be called the "Nose."

If there were no Noses, there would be no Perfumers. By this we mean that perfumers could then neither smell nor be smelt.

Both history and literature have frequently picked the nose for special mention. Cyrano de Bergerac, the nosiest hero in all literature declared: "A great nose indicates a great man—genial, courteous, intellectual, virile, courageous." Let no careless reader say that Cyrano spoke only of the physical specifications of the nose. He was a poet of great soul.

The Perfumer has traditionally been a gentleman. Some of the earliest references may, to some coarse readers, suggest a slight leer. But this is the penalty often paid by artistic temperament. Said an early perfumer to a lady: "I give thee myrrh, not that thou mayest be by it perfumed, but it perfumed by thee."

Perfumers are scholars, too. The most meticulous care must be used in describing their creations and perfume literature has developed a large and sometimes vivid vocabulary. To Sam Johnson, author of the first and famous English dictionary, his wife once said, "Sam, you smell." "You are mistaken, my dear, it is you who smell, I stink," replied the modest but famous lexicographer.

Retail Costs

The National Retail Dry Goods Association found that the cost of handling the average transaction in a department store rose 15.7 per cent.

This is the way the divisions of department store functions increased in cost:

	1946	*1947*
Administration	23.9 cents	28.1 cents
Occupancy	20.6	23.6
Advertising	16.0	18.9
Buying	17.6	19.4
Selling	40.3	47.6

Extremes

Charles Luckman made a recent international broadcast to the business men, diplomats and social leaders attending the opening in Paris of a new and sumptuous beauty salon for Harriet Hubbard Ayer.

Running concurrently with this was a Pepsodent promotion which appeared in the daily newspapers. This promotion offered the new Lana Turner ball point Pocket Perfumer, included with which is a vial of "Yu" perfume of Harriet Hubbard Ayer; all of this for 50 cents with both blue end flaps from a Pepsodent carton "or a tooth brush label" to be included with each order.

" . . . so that's the new package he's working on!"

Salesmen's Remuneration

The National Federation of Sales Executives recently uncovered some interesting data on policies governing salesmen.

This data was based upon reports from 20 clubs and from replies of approximately 1500 sales managers. Nearly two-thirds of the sales managers considered that a bonus is the fairest way to remunerate salesmen. About 15 per cent of these sales managers favored the drawing account. Payment by straight salary or straight commission had the support of approximately 11 per cent of these sales managers. Only 2 per cent of these sales managers refused to give credit to salesmen when their customers ordered independent of salesmen's calls.

Salesmen seem to have little voice in making sales policy. Seventy-two per cent of these sales managers say that salesmen have no voice in any company decision on sales policy.

Complaints of salesmen are in this order: Too much paper work, competition, price of products, compensation, unsatisfactory territory, travel conditions and slow advancement.

Three out of four sales managers allow identical expense accounts for the entire force. Where there are variations, they are mostly based upon differences in territory.

Plastics

The plastic industry last year sold 849,000,000 pounds of plastic raw materials which were actually consumed. But the ability of the industry to produce is in excess of 1,000,000,000 pounds per year. Since the end of the war somewhere in the neighborhood of 785 millions of dollars have been spent by the plastic industry for the building and equipping of new facilities. The many additional millions, which have been spent by molders, laminators and fabricators, is undoubtedly tremendous.

According to Mr. Charles J. Romieux, of the American Cyanamid Company, in a paper before the Pacific Coast Section, Society of the Plastic Industry, an investment of such very considerable magnitude, in order to receive an adequate return, must seek new markets, create new products, and devote a larger portion of effort to selling the industry's greater output. Mr. Romieux stated that much of the business in the past has come to the industry. Business must now be sought through what has been termed "creative selling."

There has been creative selling in the past in the plastic industry. Before the war there was quite a considerable amount of advertising and direct promotion in the packaging industries that was certainly creative in the sense that it was developing new applications and new usages for plastic materials in expanding the field of bottle and jar closures, collapsible tubes, plastic jars and boxes and lipstick and compact cases, in a variety of containers for pharmaceutical products, in gift packages and in counter displays.

Curiously enough in this industry, the imagination and energy in creative selling has rested almost entirely with the producer of plastic materials. The molders and fabricators to a very considerable extent have been largely inert except in terms of competitive selling. It is as if the producers of clay assumed a large part of the burden in expanding the use of ceramics.

Before the war, during the great expansion of the plastic industry in packaging, the absence of certain needed chemical or physical qualities proved a serious limitation to the adoption of the plastic container in certain very large volume fields of gackaging. The question of moisture absorption was one of the serious problems at this time.

The packaging industry should provide a major consuming market for plastic materials. It consumes an enormous recurrent volume of molded units; it provides a market with a wide range of unit prices from the standard stock mold to the creative special design which may involve a high unit cost. It gives the molder an opportunity on the one hand to secure large continuous volume, or on the other hand, if his aim lies within that direction, to establish a number of largely noncompetitive accounts through the use of artistic, creative designs.

During the war this industry had great expectations regarding the packaging benefits it would receive from the plastic industry. The industry had been able to observe, during this prewar period, a number of notable instances in which the plastic container gave a great competitive advantage to a number of companies. This was not only true for some perfumers and cosmetic manufacturers, but also as clearly observed among certain packages of the ethical pharmaceutical manufacturers for products which had no retail display but were sold only on a doctor's prescription.

The package planning which took place so actively during the war leaned very heavily toward an extended use of plastics by this industry. These plans have not matured because in the frustrated period which followed the war, combining as it did, first a shortage of all packaging materials and then an accumulation of manufacturers' inventories, has so far held up the vigorous introduction of new products and new packages.

The time will come however in this industry, and it should not be far off, when a vigorous revival of new packaging will be necessary. Too many companies have been compelled to coast for too long on a stabilized package for the type of product which lives and breathes through the constant stimulation of consumer interest because of creative packaging ideas.

Ad-Liberties

An attack on much present-day advertising as silly and "uppity" was made by Bernice Fitz-gibbon, advertising director of Gimbels.

Miss Fitz-gibbon questioned the fairness of advertisements which assure the tired shopgirl that all she has to do to "hook a man" is to buy a certain product.

"It really amounts to a course of psychiatric treatments with the main difference that it can be accomplished with a 50-cent jar of goo instead of a $50 an hour analyst," she said.

Citing an illustration which she did not identify by name she said, "The ad goes on with the argument for unlocking the digestive tract, unlocking the natural highlights of the hair, or uncovering the natural brilliance of tooth enamel. Almost everything is slanted to sex."

"Now is preoccupation with sex, this feeling that woman is nothing but a dripping creature to be hung around a man's neck like a lavaliere can be laid smack at the door of the advertising agencies.

"Worst of all is the contention, concealed or obvious, in most national advertising that you can always buy the cure for what ails you, the purchase of a bottle or a tube of something can turn black despair into golden exaltation."

Miss Fitz-gibbon declared advertising copy should be crisp, casual and superficial. It should stay out of the bedroom and such factual, down-to-earth description will sell just as much as the phony dream world stuff.

tops *in Sales Appeal*
tops *in Manufacturing Perfection*
lipstick containers . . .
by Plume & Atwood

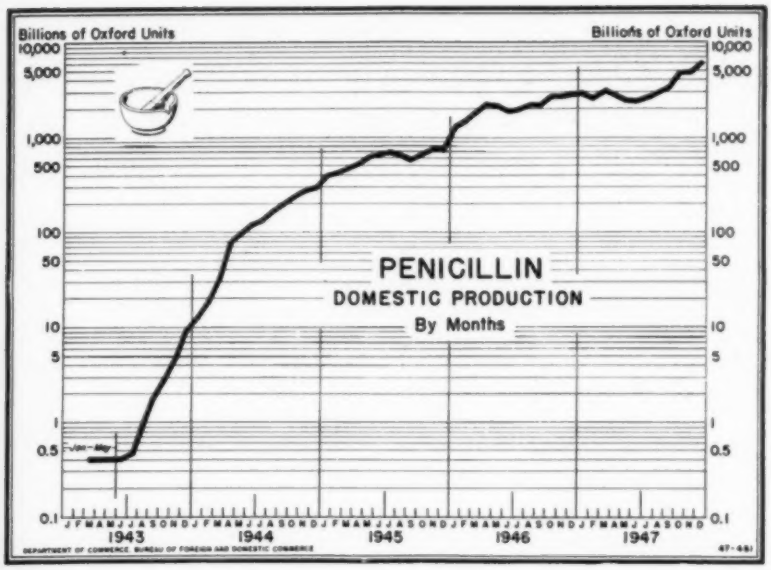
● Ever wish for an entirely new and differently styled lipstick container . . . one that would have instant **"pick-me-up" appeal?** Of course you have, and so has every other cosmetic manufacturer. But, how often have you been told it was prohibitive in cost or impossible to make?

Here, at **Plume & Atwood,** difficult-to-make containers as well as standard types, like those above, are produced daily by the thousands . . . and at reasonable cost. Our engineering staff particularly welcomes those designs that are often thought to be impossible to make . . . for at Plume & Atwood, **the "impossible" is performed every day!**

Our representative will be pleased to call at your request.

The Plume & Atwood Mfg. Co.

EST. 1869 **WATERBURY, CONNECTICUT**


Billions of Oxford Units
Billions of Oxford Units
10,000
5,000
1,000
500
100
50
10
5
1
0.5
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PENICILLIN
DOMESTIC PRODUCTION
By Months
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1943
1944
1945
1946
1947

Misleading Advertising

A large increase in the number of complaints on exaggeration and misrepresentation in advertising is reported by the National Better Business Bureau. Most of these complaints concerned misleading statements on values and prices which reflected unmistakable signs of sharpening competition.

The advertising of special combination articles, in which there is some question of misrepresentation as to the value, is growing particularly in drug and cosmetic products.

A specific instance cited is that in which a well-known men's toilet article was offered in combination with a related article. The advertising states that the well-known item has a certain retail value. However, advertisements a month or two earlier show that this well-known product was sold at a price more than 20 per cent below the retail value claimed for it in the combination offer.

In another case, a hair tonic, in combination with a new product, was given an inflated value and then slashed by 40 or 50 per cent in price.

Pharmaceutical Exports

Although U. S. imports and exports in 1947 reached their highest dollar levels in the history of U. S. foreign trade, and exports far outweigh imports by this country, imports for the last six years have shown a steady increase from $2 billion in 1942 as compared with the 1947 import figures of $5 billion.

Exports for the same period have been somewhat erratic, in 1942 exports amounted to $8 billion as compared with the 1947 total of $14 billion. In the intervening years, the gap between imports and exports, which was at its widest in 1944 and fell off, has increased as shown for the figures given for 1947. Of course the great discrepancy in these figures is due to the huge volume of exports demanded by the war effort and include interim aid, U. S. Foreign Relief, UNRRA, lend-lease, etc.

As regards exports of medicinal and pharmaceutical preparations overseas sales of U. S. drugs and pharmaceuticals exceeded $177 million in 1947 in contrast to the $145 million of the preceding year. This increase of 23 per cent was accounted for by the expansion in sales to Africa and the Far East from $40 to $49 million, in South America from $40 to $48 million, and to North America from $38 to $48 million, reflecting a 23 per cent increase.

Breaking these figures down a bit, December exports of medicinal and pharmaceutical preparations amounted to $15,331,518, up 3 per cent when compared with December 1946.

Largely responsible for this increase is the group of medicinal chemicals for prescription use which includes the antibiotics, principally penicillin, and streptomycin. Since last June, when allocations for export of streptomycin began to be stepped up month by month, due to greatly expanded domestic production, antibiotic shipments rose from $2,462,582 in the month to $4,699,244 in December. During June 1947 the dollar value of antibiotic medicinals shipped overseas accounted for 15 per cent of the total value of all medicinal and pharmaceutical preparations. Antibiotics exported in December 1947, 31 per cent of the total dollar value of medicinals shipped that month.

It is interesting to note the 1947 shipments were ten times the dollar volume of the peak prewar year 1938. Had the tempo of sales during the first six months been maintained in the last half of the year, the volume would have exceeded $200 million.

Domestic production of antibiotics which has made these exports possible has been expanding from month to month. Production of penicillin in November amounted to 4,870 billion units, compared with 4,745 billion units during the preceding month.

Streptomycin production January 1948 totaled 1,329,193 grams. The February export quota on this antibiotic approximated 1.25 million to 1.5 million grams. All these figures are from the Department of Commerce.

"Spurchases"

Unplanned buying, formerly referred to with the rather redundant term of "impulse buying" has been named "spurchases" by packaging specialists of the Du Pont Company's cellophane division to designate spur-of-the-moment buying decisions.

Regardless of the terminology, the growing practice on the part of the shopper to make decisions at the point of sale is an important consideration to America's manufacturers and merchandisers whether the product be a cheese or a luxury perfume.

Surveys by the Du Pont market research division show that 38.2 per cent, or about 2 of every five purchases are in the unplanned category.

More Spending in Some States

Drug and cosmetic sales managers who have been worrying over the increasingly slimming margin of the consumer dollar that is left after food and drink, should examine a map showing the states which now benefit from the split-income tax.

For incomes over $5,000 a year this tax reduction will be substantially higher in these states. These newly enriched markets, from an income tax view-point, include all states except the Pacific Coast, the Southwest, Nebraska, Michigan and Louisiana.

Perfume for All

The large increase in department store advertising of bulk perfume in dram size is certainly a sign of the times.

The bulk perfume business in retail stores has always been a heavily debated subject among perfumers. One school of thought maintains that a perfume and a perfume company is always identified in the public mind by the lowest price in its line, and that bulk sales are not compatible with top prestige.

The other school of thought maintains that the public does not include the price of a dram from bulk in thinking of the price and prestige of perfume, and that this price psychology can only be applied to the price of the bottle perfume. This latter group miintains that bulk sales substantially broaden the perfume market, that if it were not for the dram size at $2.00 or $2.50 many thousands of women would never be able to purchase perfumes. They also maintain that bulk sales have the same fundamental and valuable assets as has the cologne with the atomizer; that is it gives the store and the salesgirl an opportunity of generously sampling the odor to prospective buyers, a thing that is not possible with the sealed bottle perfume.

Many perfumers, who are unwilling to take a decided stand on either side of this fence, generally end up with the characteristic attitude of the ostrich with his head in the sand and his tail in the air. These people will not furnish bulk to the store, but they successfully avoid noticing that the store is breaking up one of the larger bottles for dram sales.

Incidentally, before the war this breaking up of a bottle very often proved quite profitable to the stores and certain brands of perfumes. This was because a few of the perfume bottles seemed to be considered a collector's item and there was always quite a scramble for the empty bottle.

A very interesting thing about all of these department store ads in daily newspapers for the dram size from bulk is that there is quite a wide variation in prices for the same perfume in the same dram size between stores and cities. A $2.50 dram price may run all the way from $1.75 to $2.50. The Fair Trade advocates apparently do not wish to take a position on a Fair Trade price for dram size today even among the top prestige names.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of Febraury 1948 as compared with the same period in 1947.

	Department Store	*Drug Store*		*Department Store*	*Drug Store*
Atlanta	+4	-2	Memphis	X	+6
Baltimore	+9	-1	Milwaukee	+12	0
Birmingham	+10	+2	Newark	+8	+9
Boston	+4	+6	New York	+7	+5
Chicago	+5	+8	Philadelphia	+10	+2
Cincinnati	+7	+1	Pittsburgh	+11	+7
Cleveland	+7	+1	Providence	+2	+1
Dallas	+8	X	St. Louis	+6	+4
Detroit	+8	+7	San Francisco	+2	0
Indianapolis	-1	+16	Seattle	-3	0

Advertising Memos

N. W. Ayer & Son, Inc., has resigned the account of the Rexall Drug Company effective July 15, 1948.

A revised campaign for Midol is announced by The Centaur-Caldwell Division of Sterling Drug, Inc. Text has been simplified to improve effectiveness of the display. Although largely illustration, each advertisement contains reminder elements and strong product definition.

Helene Curtis Industries, have issued a manufacturer-wholesaler fair trade contract covering their products "Suave" and "Creme Shampoo."

Barbara Gould has introduced its new "Beauty Cream" shampoo, reported to lather freely in any water. Retail price is $1 for 4 ounce and $1.75 for 8 ounce.

The Toni Company has bought the mystery program, "Crime Photographer aired over Columbia Broadcasting System and also has renewed its contract with American Broadcasting Company to continue the "Ladies Be Seated" show.

Dorothy Gray, Ltd., is offering a two-for-one lipstick with two full size lipsticks sold as a special introductory purchase for $1, the regular price of a single stick.

Halgar, Inc., Chicago home permanent wave manufacturer, is starting an advertising campaign for its improved and renamed product, "Bu-Tee-Wave," price is $3.98.

A new hand deodorant cream called "Palm Sweet" retailing for 43 cents is being tested by Cosmetic Distributors, Inc., a subsidiary of the Block Drug Company. Plans call for national distribution of the product later this year.

Working on the same principle as mercurochrome swabs, that are crushed and then dabbed onto the skin, Parfums Weil have come out with "Evettes," little ampules of perfume, that may be carried in the purse and used when and where the user needs them.

The idea is new and should prove to be a good selling point for perfumes. The perfume is sealed in the Evettes and won't leak or evaporate, remaining that way until crushed by the user. In the Evettes themselves there is just enough perfume to be used on the spot. Package of twelve retails for $1.50.

A combination introductory and gift package put out by Mary Chess contains a small bottle of toilet water and a vial of Roman bath oil, retailing at $2.

A three-piece combination of Seaforth men's toiletries called the "Traveler Set" should prove ideal for men who travel. Featured are duralite containers which hold shaving lotion, talc and hairdressing. The outer wrap is in simulated alligator and sells for $3.75.

Johnson & Johnson have announced a complete repackaging program of many of their products. Newly designed smaller shipping cases are intended to permit a large increase in handling orders at wholesale in unbroken case quantities. The Company also plans shortly to announce a new retailer discount schedule which will be tied in with the new packaging program.

The Carlay company, manufacturers of Ayds vitamin candy used by many to streamline the figure has repackaged its product. Formerly the 30 day supply that sold for $2.25 now contains a 35 day supply retailing for $2.89.

NEWS...

William Wharton Retires

The Federal Security Agency has announced the retirement after forty-one years of governmental service of William R. M. Wharton, chief of the Food and Drug Administration's Eastern district. Charles A. Herrmann,

WILLIAM WHARTON

assistant chief, has been designated acting chief by FDA Commissioner Paul B. Dunbar.

One of the original appointees under the old Pure Food and Drug Act, Mr. Wharton began as a field investigator at the St. Louis station, subsequently becoming a chief inspector. He has held his present post for twenty-eight years, and was concerned with many notable FDA actions, including the recent Sullivan case, and other equally controversial proceedings.

Flett Heads ACI

The American Institute of Chemists elected the following officers at its Silver Anniversary meeting, May 7, at the Waldorf-Astoria Hotel, New York:

President, Lawrence H. Flett, director, new products division, National Aniline division, Allied Chemical and Dye Corporation. Vice-president, Dr. Raymond E. Kirk, Polytechnic Institute of Brooklyn. Secretary, Dr. Lloyd Van Doren, chemical consultant. Treasurer, Dr. Frederick A. Hessel, president, Montclair Research Laboratories. Councilors, Dr. M. L. Crossley, American Cyanamid Company, Dr. James R. Withrow, Ohio State University and John M. McIlvain, The Atlantic Refining Company.

Lever Brothers Buy Two Products From Warner

Lever Brothers Company has acquired two new products, Rayve Creme Shampoo and Hedy Wave Home Permanent from the William R. Warner Company.

Rayve Creme Shampoo, which was first introduced to the public in June 1944, is one of the leading sellers in the field. Hedy Wave Home Permanent was introduced January 1948. The two products will be manufactured and merchandised by the Pepsodent division of Lever Brothers Company.

The acquisition of these two latest products by Lever Brothers marks another step in the expansion program upon which Lever embarked during the last few years. In 1944, the Pepsodent Company was made a division of the Lever organization.

Elected Director of Maltine Co.

Guy G. Gabrielson has been elected a director of the Maltine Company, he is president of Carthage Hydrocol, Inc., and Nicolet Asbestos Mines, Ltd.

A prominent figure in public life, Mr.

GUY G. GABRILLSON

Gabrielson was formerly a member of the New Jersey House of Assembly and served successively as its majority leader and speaker.

Dr. Klumpp Heads APMA

Dr. Theodore Klumpp, president of Winthrop-Stearns, Inc., was elected president of the American Pharmaceutical Manufacturers' Association at the final session of that organization's 3-day convention in Havana. He succeeds James L. Rogers of the Central Pharmacal Company.

Other newly elected officers of the Association were: Dr. J. O'Neil Closs, The Tilden Company, secretary; Howard Fonda, Burroughs Wellcome & Company, Inc., Eastern vice-president; M. F. Charley, Standard Pharmacal Company, Central vice-president; James Boyle, Boyle & Company, and Fred Misch, The Smith-Dorsey Company.

DR. T. G. KLUMPP

The directors chosen are: George Orr, The William S. Merrell Company; William Addenbrook, The Zemmer Company; John Hammer, Smith, Kline & French Laboratories; James L. Rogers, The Central Pharmacal Company; Dr. Raymond L. Conklin, Ames Company, Inc.; Edgar Patch, The E. L. Patch Company; G. Preston Snow, Cutter Laboratories, and J. Paul Folsom, Lederle Laboratories.

Pond's Elects Young V. P.

Ponds Extract Company has elected Robert M. Young, vice president. Mr. Young, who is head of the division manufacturing tissues, joined the organization in 1943.

P & S at Toronto Trade Fair

Polak & Schwartz, Ltd., Enfield, England, and Polak & Schwartz, Inc., New York will be represented at the Canadian International Trade Fair being held in Toronto the first two weeks of June.

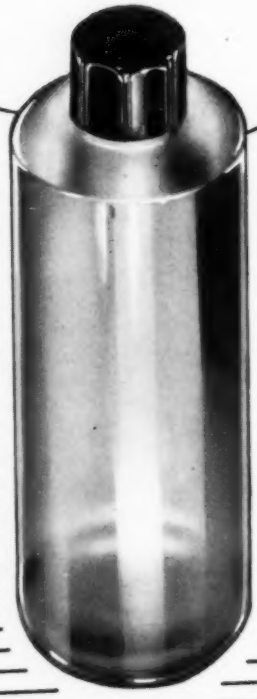
Representing the firm will be Mr. Bohemen and Mr. Mansfield, Mr. d'Ancona and L. Davids. The Company's booth is number 833-34, Group 9.

FOUR OUTSTANDING STOCK BOTTLES

available in all popular sizes

N-30

P-45



L-33

C-39

Here's the short cut to smart packaging—an artistically designed Swindell stock bottle plus your distinctive label.

Shown here are four of the many stock bottles available for quick delivery in popular sizes ranging from 1/8 ounce to 16 ounces.

SWINDELL BROS., BALTIMORE, MD.
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Chemists Honor Dr. Thomas

Dr. Charles Allen Thomas, executive vice president of Monsanto Chemical Company, was awarded the Gold Medal of The American Institute of Chemists, at the Institute's Silver Anniversary dinner, held at the Waldorf-Astoria, May 7.

Dr. Foster D. Snell, retiring president of the Institute, presented the medal to Dr. Thomas, citing him for his "outstanding work in the development of atomic energy, leadership in research, administrative ability and encouragement of basis research."

Dr. Thomas in accepting the Medal said that scientists forced into administrative positions because of the complexities of modern industry must acquaint themselves not only with the unchanging laws of chemical reactions but also with the ever changing aspects of human behavior.

Marshall Wood Honored

On the occasion of his twenty-fifth anniversary, Marshall K. Wood, vice-president and general manager of The Gallagher Drug Company, Dayton, was the receipient of a framed testimonial, a presentation of co-workers.

Winningham Made Sales Mgr.

H. V. Winningham has been appointed sales manager of the Albers Drug Company of Knoxville, Tenn.

Paraffine Appointments

At a meeting of the board of directors of the Paraffine Companies, Inc., April 23 in San Francisco, Horace J. Lilleston was appointed vice-president of the corporation, and Mrs. Philomene Hall Negely was appointed assistant secretary.

Krone Joins Liquid Conditioning Corp.

Liquid Conditioning Corporation of Linden, N. J., has announced that E. Philip Krone has joined its Buffalo, N. Y., representative, Brookman-Hazel Associates, as partner of that organization.

Shoninger Back From Europe

Frederick E. Shoninger, president of Antoine Chiris Company, Inc., has returned from a two months visit to the French Chiris Company's plants in the south of France and Italy.

Hildebrandt Succeeds Benedict

Oliver Wayne Benedict, director, vice-president and general sales manager of the Norwich Pharmacal Company has retired from active service with the

O. W. BENEDICT

Company following an association of over thirty years, He will continue to serve on the board of directors.

At the same time H. Thornton Hildebrandt, formerly assistant general sales manager, was elected to the board

H. T. HILDEBRANDT

of directors of the company and succeeds Mr. Benedict as general sales manager and vice-president.

Milton Promoted to District Mgr.

Robert H. Milton has been promoted to the position of district manager of district 4 for Norwich Pharmacal Company. As a result of this change in the Eastern division, Don T. Jones will move from Brooklyn to the territory left by Mr. Milton. Stanley Luntz will take over the Brooklyn area.

Dr. Aall Advanced

Dr. Christian H. Aall has been promoted to the newly created position of field research technologist for Monsanto Chemical Company's plant at Monsanto Tenn.

Lakeside Names Two Directors

Lakeside Laboratories, Inc., Milwaukee, has named Edwin A. Gallum and J. Victor Loewi to its board of directors.

J. K. Lilly Named President

J. K. Lilly, Jr., has been elected president and vice-chairman of the board of Eli Lilly Company. He succeeds Eli Lilly, who becomes chairman of the board. Carl F. Eveleigh was named executive vice-president, F. M. Hadley, treasurer, Evan L. Noyes, assistant treasurer, and Nicholas H. Noyes, chairman of the finance committee.

Trubek Labs. Adsorbs Two Firms

Trubek Laboratories, Inc., East Rutherford, N. J., has adsorbed the corporate entities of George G. Fries & Company, and Harold L. Simons, Inc. The new owner said that the plant in Long Island City will continue to be operated under its name.

New Officers of CDA

Newly elected officers of the Commercial Development Association for the year beginning April 1, 1948 are: Lauren B. Hitchcock, president; J. H. Boyd, vice-president; C. D. Goodale, treasurer; F. A. Soderberg, executive secretary; Directors of the association are: W. H. Bowman, W. H. Harding, K. H. Klipstein and J. J. Schaefer.

Ayer Opens New Paris Salon

Harriet Hubbard Ayer celebrated the twenty-fifth anniversary of the establishment of its Paris salon by opening its new half-million dollar salon at 89 Rue de Faubourg, Ste. Honore, Paris.

Requisitioned as a military headquarters by the Nazis during the war, the building has been restored in recent months by outstanding French decorators and craftsmen.

Heyden Safety Record

Safety records set by the Heyden Chemical Corporation plant at Fords, N. J., have received special recognition.

As of the end of March, 1948, plant employees have worked 316 days, or more than 440,000 man-hours, without a lost-time accident. As a result the plant received a Merit Award in the state-wide Inter-plant Safety Contest sponsored by the New Jersey Department of Labor and the New Jersey Industrial Safety Committee.

Keasbey & Mattison Celebrate Anniversary

Keasbey and Mattison Company, which had its beginning with a small pharmaceutical laboratory in 1873, is celebrating its seventy-fifth anniversary.

The company, founded by the late Henry G. Keasbey and Richard V. Mattison has been one of the leaders in American manufacturing of asbestos products.

Wood in New Post

R. L. Warren, president of Glass Container Manufacturers Institute, has announced the appointment of Benjamin Wood as director of marketing for the Institute.

Society of Chemists & Pharmacists Elect

The American Society of European Chemists and Pharmacists met April 2 to re-elect members of the board. They are as follows: Herman Mark, president; Fritz Lieben, vice-president; Henry Goldschmiedt, executive vice-president; Benno Baecker, honorary secretary; Marco Birnholz, treasurer; H. C. Furstenwalde, and Franz Koenigsberger. Desider Fleischhacker was admitted as new member of the board.

Insecticide Mfr's Meeting

The National Association of Insecticide & Disinfectant Manufacturers, Inc., will hold its thirty-fourth mid-year meeting at the Monmouth Hotel, Spring Lake, N. J., June 14 to 16.

McKesson Post Vacated by Faxon

Henry D. Faxon has retired as a regional vice-president of McKesson & Robbins, Inc., after fifty-six years with the organization and predecessor companies. He will continue as a member of the board.

Mr. Faxon was president from 1923 to 1928 of the Faxon & Gallagher Drug Company, which his father founded. The firm was merged with McKesson & Robbins in 1928 and he became executive vice-present in charge of McKesson wholesale drug divisions in the Central West region, and became a director in 1929.

Hoffmann-La Roche Promotes Brown

Thomas Brown, San Francisco division manager, has been appointed sales manager, specialties division, Hoffmann-La Roche, Inc., Robert A. Hardt, director of sales and advertising has made known.

Norda Issues Catalog

A new catalog of essential oils, aromatic chemicals, perfume compounds, and flavors has been issued by the Norda Essential Oil and Chemical Company, 601 W. 26th St., New York 1. Copies are available from the company.

DuPont Research Expansion

A $30 million dollar expansion of research facilities at the Du Pont Company's experimental station in Wilmington, Del., has been approved by the executive and finance committees of the company.

This is the biggest single laboratory project the company has ever undertaken and will make the Wilmington experimental station one of the largest research establishments in the world. When completed the company expects to have 900 technical employees engaged exclusively in research work at the station.

Nopco Appointments

The board of directors of Nopco Chemical Company has authorized the creation of the office of assistant vice-president, and designated the president to appoint two or more persons to serve in that capacity. Charles P. Gulick, president has appointed the following assistant vice-presidents: Charles I. Post, C. Arthur Larry and Edwin A. Robinson.

Arden Story

Required reading for the industry should be the biography of Elizabeth Arden in the April 24 issue of the Saturday Evening Post, entitled "High Priestess of Beauty."

Sterling Prod. Div. Moves

Headquarters of the Sterling Products Division of Sterling Drug, Inc., have been transferred from Whelling, W. Va., to Monticello, Ill.

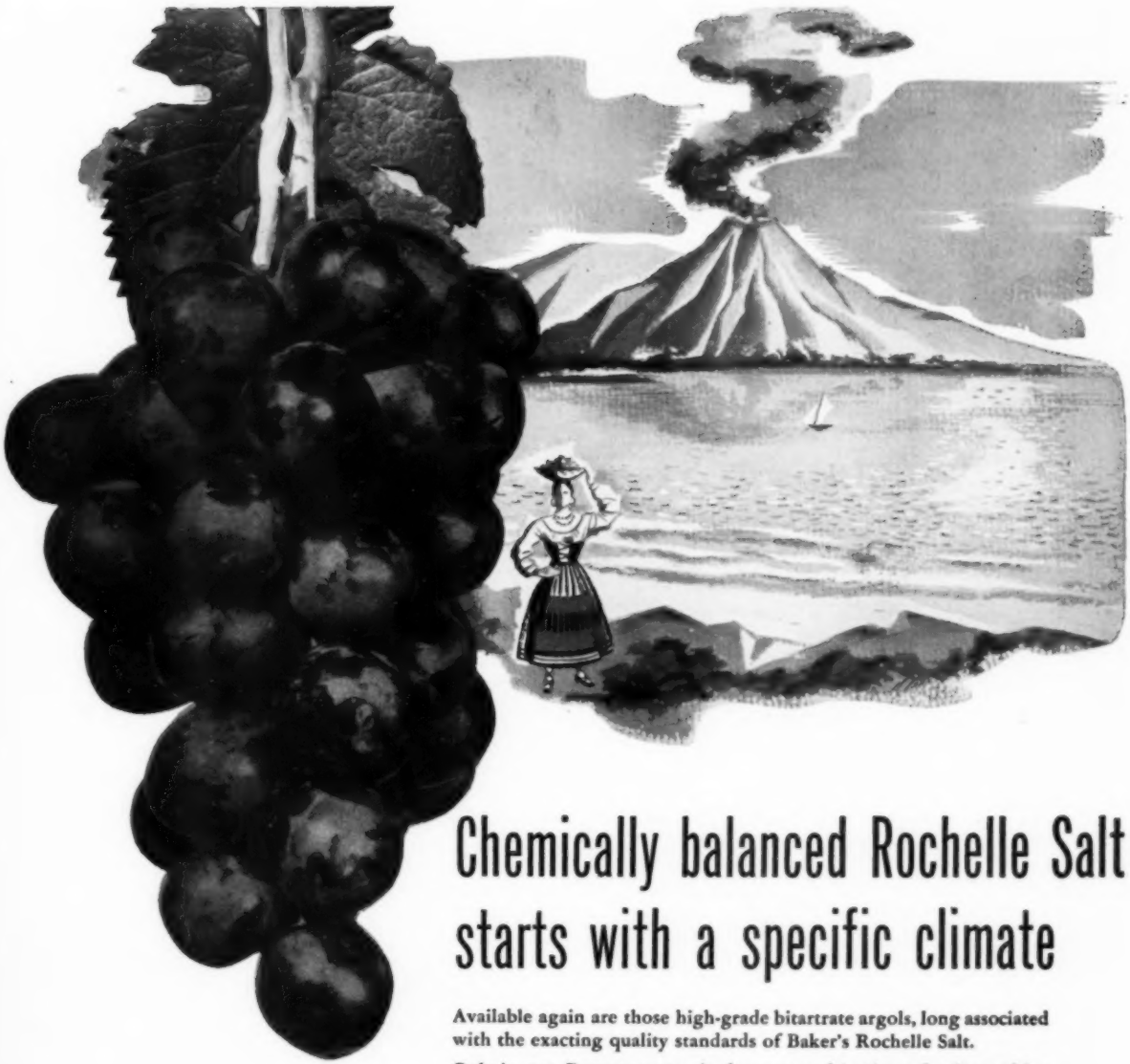
British Export Goal

At the end of last year, the British drug industry was only $1,560,000 short of its official export quota, it has been revealed by London.

The target for the drug trade was set at a figure of about $6 million, to be reached by mid-1948. In the final quarter of 1947, export values of drugs and medicines rose to about $4,440,000.

According to spokesmen for pharmaceutical manufacturers, the target would have been exceeded but for conditions abroad. Out of the country shipments in many cases were limited by bans imposed by importing nations rather than by lack of demand. Some manufacturers stated that the government has failed to take world-wide conditions into consideration in setting its export quotas.

A corner of the new selling salon in the Helena Rubinstein Building in New York City, designed and decorated by Ladislas Medgyes. The shop is decorated with articles from Mme. Rubinstein's private collection.



Chemically balanced Rochelle Salt starts with a specific climate

Available again are those high-grade bitartrate argols, long associated with the exacting quality standards of Baker's Rochelle Salt.

Only in one European area is there a combination of soil, sunshine and growing weather that will produce grapes for bitartrate argols acceptable to Baker.

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Baker's Rochelle Salt dissolves quickly in solution. There is freedom from insoluble matter and heavy metals to an unusual degree. There is chemical balance between the alkali metals, Potassium and Sodium, and Tartaric Acid.

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Continental Can Shows Increase

Consolidated net earnings of Continental Can Company, Inc., and wholly owned subsidiaries for the period ending March 31, 1948 were $4.29 per

CARLE C. CONWAY

share as compared with $2.22 per share in the corresponding twelve months ending in 1947, and $3.88 per share for the calender year 1947 according to a report made by Carle C. Conway, chairman of the board.

Mr. Conway indicated that the net sales of the company for the first quarter of 1948 amounted to more than $63 million dollars compared with $45 million for the same period last year. Showing an increase of approximately 40 per cent.

Healy Does It Again!

Michel J. Healy, president of Chem-Arom Company, Inc., has chalked up another score in the diaper derby with the announcement of the birth of a fourth daughter. Congratulations Mike.

Robertet, Inc. Open New Office

P. Robertet & Cie., Grasse, France, announce the establishment of its New York office, P. Robertet, Inc., with offices located at 125 E. 23rd St., New York 10.

Leube With Chen Yu

Randolph P. Leube, formerly vice-president and general manager of Mark Cross toiletries division has been appointed eastern division manager of Chen Yu, Inc.

Witte Sets Up Own Firm

James G. Witte has resigned as head of packaging activities of Montgomery Ward & Company to set up his own packaging consultant firm under the name of Witte Company. Offices are located at 20 E. Jackson Blvd., Chicago.

New Sales Area for Mathieson Chem.

A new Southern sales area, with headquarters at New Orleans, and new district sales managers at New Orleans and Houston, have been announced by D. W. Drummond, vice-president-general manager of sales of Mathieson Chemical Corporation.

Vernon Woodside will be in charge of the New Orleans sales district and Roland F. Boehm will be in charge of the Houston district.

Sidur With El Farmaceutico

Robert H. Sidur has been appointed to the advertising staff of El Farmaceutico and Pharmacy International, export drug trade magazines.

New Berje Sales Office

Berje Products Company announces the formation of a new sales office under the direction of George T. Cummings, president of Geo. T. Cummings Company at Arlington and Fort Worth, Texas. The office will cover the southern part of the U. S. and act as technical advisers to manufacturing firms there.

Hoffman Named Treasurer by Amer. Can

The election of Edmund Hoffman as secretary and treasurer of American Can to succeed R. A. Burger, who retired after 47 years with the company has been announced.

Dr. Deane Advanced

Dr. Charles W. Deane has been appointed chief engineer of E. R. Squibb & Sons and will head all Squibb en-

DR. C. W. DEANE

gineering activities, domestic and foreign, with responsibility for engineering, maintenance, construction, and engineering aspects in the development of new processes and products.

Britton Heads Enjay Co.

The election of John A. Britton, Jr., as president of Enjay Company, Inc., succeeding H. W. Fisher has been announced. O. V. Tracy, assistant

JOHN A. BRITTON, JR.

manager of Esso Standard's chemical products department, has been elected a director of Enjay, succeeding Dr. H. G. Burks, Jr. Mr. Fisher will continue to serve as a director of Enjay.

Seward Joins Sherman Labs.

John F. Seward, formerly manager of professional service and hospital sales departments of Frederick Stearns & Company, has joined Sherman Laboratories as general sales manager. He succeeds E. M. Shaffer.

Cooper Joins Liquid Conditioning Corp.

Liquid Conditioning Corporation, Linden, N. J., announces the appointment of Robert A. Cooper as field engineering and sales representative in Northern N. J.

Rexall Advisory Board Adds Five

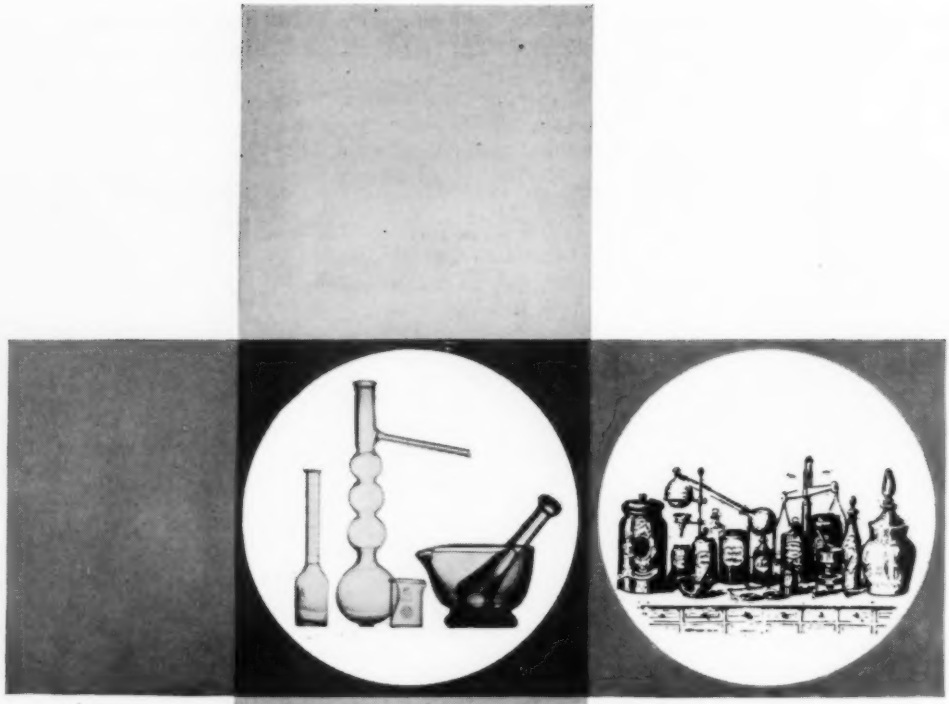
Five independent druggists have been elected new members to serve on the Rexall board of advisors, Justin W. Dart has announced.

Elected were: L. Faherty; Worth B. Powers; George L. Scharringhausen, Jr.; Lyman H. Wareham and Charles W. White.

Pepsodent Wins Container Suit

The makers of Dr. West toothbrushes lost their suit to stop the Pepsodent Company from using a similar container for their toothbrushes.

Circuit Judge John Prystalski dismissed a petition for an injunction. He ruled that though the glass container used for each of the two brushes are similar, a purchaser can easily distinguish by reading the label.



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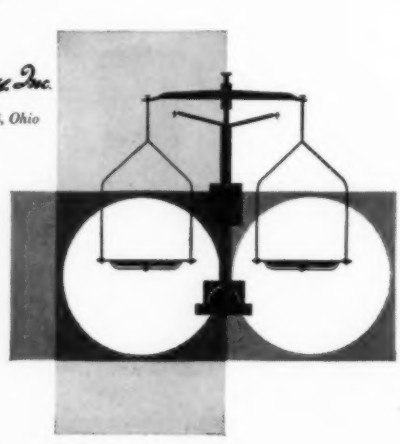

High Made VP of Vick

Herman A. High, who has been a director of Vick Chemical Company since 1943, has been elected vice-president and will devote full time to problems of overall company management.

Kirby Peake has been named to succeed Mr. High as general manager of the Vick division that markets the

HERMAN A. HIGH

company's line of cold remedies. Mr. Peake was previously assistant general manager.

Chem. Salesmen Golf Match

The Salesmens Association of the American Chemical Industry holds its golf outing June 15, at the Bonnie Briar Club, West Chester County, N. Y.

Majestic Metal Expands Showroom

Majestic Metals Specialties, Inc., has enlarged its showroom at 565 Fifth Ave., New York in conjunction with the company's expanded line. Joseph Leshin remains in charge of sales as heretofore.

American Potash Earnings

Earnings of American Potash & Chemical Corporation during 1947 increased 39 per cent over 1946, while production and sales rose to an all time high. Net income for the calandar year 1947 totaled $2,106,319, compared with $1,514,105 in 1946.

Schering Research Grants

Research grants to four additional leading medical institutions have been announced by Schering Corporation, N. J.

The Schering fellowship on the enzyme hyaluronidase has been renewed at the Cornell University, department of zoology, under the supervision of Dr. Samuel L. Leonard.

A Schering Fellowship in the endocrinology of geriatics was established at the Western Reserve University Hospitals of Cleveland under the direction of Dr. Reginald A. Shipley. The third grant was given to the Philadelphia General Hospital Arthritic Fund for study of gold therapy supplemented by androgens and estrogens for the treatment of arthritis. Dr. Abraham Cohen will direct this work.

New anti-spasmodics developed by Schering will be studied at Jefferson Medical School of Philadelphia under the direction of Dr. Richard T. Smith.

Sharp & Dohme Units Consolidated

Consolidation of the Jacksonville and Atlanta district sales offices in Atlanta has been completed, E. W. Metzger, manager of domestic branches for Sharp & Dohme, Inc., has announced.

Customers in the company's Jacksonville area will be serviced from Atlanta.

Honored by University

Dr. Ernest H. Volwiler executive vice-president of Abbott Laboratories, has been elected this year's recipient of honorary membership in Beta Gamma Sigma, scholastic fraternity in the College of Commerce, University of Illinois. He was chosen as the man who has "distinguished himself in the field of business."

Heads Pharmacology Dept.

Dr. Frank T. Maher has been appointed professor of pharmacognosy and pharmacology and head of the department at the University of Illinois College of Pharmacy.

Dean Earl R. Serles has announced that Dr. Maher will assume his duties on September 1, 1948. He will succeed the late Dr. Elmer H. Wirth.

Olsen Named VP

Norman Olsen, sales manager of Aluminum Seal Company, has been made vice-president in charge of sales for the company, it has been announced by Max M. Kipfer, Seal Company president.

Pepsodent Appointment

The appointment of Tad Jeffery as assistant advertising manager of the Pepsodent Division, Lever Brothers Company, has been announced by Henry F. Woulfe, Pepsodent president.

Dr. Curme Elected VP

Dr. George O. Curme, Jr., has been elected vice-president of chemical research of Union Carbide and Carbon Corporation.

Dr. Curme is a pioneer in the American organic chemical industry. He was the first to develop the chemistry of aliphatic compounds in this country. His research work on acetylene at the

DR. G. O. CURME, JR.

Mellon Institute of Industrial Research, from 1914 to 1919 resulted in the formation in 1920 of Carbide and Carbon Chemicals Corporation.

Sterling Drug's New Plants

Progress on two new manufacturing units has been announced by James Hill, Jr., president of Sterling Drug, Inc. A new pharmaceutical plant in Auckland, New Zealand is now in full operation, and additions to the present plant in Sydney, Australia will be completed in 1949, he said.

The expansion program in these two countries provides manufacturing facilities for more than 350 pharmaceutical specialties for Stearns and for the Nyal Company of Australia and New Zealand.

Solmssen Named to New Post

Kurt A. Solmssen has been appointed to the new post of executive assistant to the president of Smith, Kline & French Inter-American Corporation. In 1938 he was appointed president of the Wilmington Chemical Corporation, Wilmington, Del., and resigned in 1941 to become vice-president of Synvar Corporation. Since 1943 until his latest appointment, Mr. Solmssen was with the Securities Exchange Commission, where he was an expert on foreign investments and a member of the Commission's executive staff.

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Koster Wax Refining Co. Formed

The F. B. Koster Wax Refining Company has been formed in Guilford, Conn., by Frans B. Koster, former vice president of Koster Keunen, Inc., Sayville, N. Y.

The plant now nearing completion will have facilities for sun bleaching about 1,000,000 pounds of beeswax per year.

Felton Completes New Building

On April 15, Felton Chemical Company moved into its new, modern four story steel and concrete building adjacent to their existing group of buildings.

The completion of this new unit marks the end of an expansion program initiated five years ago and has resulted in a four-fold increase on floor space and manufacturing facilities at the main plant in Brooklyn, a new factory designed by Robert Felton and built under his supervision at West Los Angeles and the pending occupation of larger quarters in Montreal, Canada.

N. Y. Pharmacists Hear Smith

Stuart V. Smith, vice-president in charges of sales for Wyeth, Incorporated was the guest speaker at the meeting of the New York branch of the American Pharmaceutical Association, held at Columbia University College of Pharmacy, May 10. Mr. Smith is an authority on the problems of ethical drug merchandising and spoke on the industry's merchandising program.

Package Machinery Moves in Atlanta

The Package Machinery Company's office in Atlanta has been moved to 1222 Peachtree St., N. E.

Tri-City Golf Meet in St. Louis

The Associated Drug and Chemical Industries of Missouri, Inc., will be host on June 28-29 to the Allied Drug and Cosmetic Association of Michigan; Chicago Perfumery, Soap and Extract Association, and the Chicago Drug and Chemical Association.

The occasion is the annual Tri-City golf meet between the four clubs located in these three cities.

New Inco Booklet

A new booklet discussing various aspects of galvanic corrosion has been issued by The International Nickel Company designed for the production man as well as the research engineer.

It is available without cost from The International Nickel Company, New York.

Chem. Spec. Co. Set Up Here

New headquarters for the development of sales in the field of free Testosterone and Progesterone in the U. S. have been set up by Chemical Specialties Company, Inc., at 22 E. 40th St., New York 16. The company is an affiliate of Syntex, S. A., Mexico.

Vitamin B12 scientists who isolated the new anti-pernicious anemia vitamin. The five men are all members of Merck & Company, Inc., from left, Edward L. Rickes, Frank R. Koniuszy, Dr. Thomas R. Wood, Dr. Karl A. Folkers, Dr. Norman G. Brink. In front is Dr. Mary S. Shorb of the University of Maryland.

Michelene Guide

M. Michel and Company, Inc., have issued a brochure containing developments in surface-active agents. The Michelene guide is available free to manufacturers, distributors and jobbers and can be obtained by writing to M. Michel and Company, Inc., 90 Broad St., New York 4.

Roche Sales Manager

Robert A. Hardt, director of sales and advertising for Hoffmann-La Roche Inc., has announced the appointment of Thomas Brown as sales manager of the specialties division.

Mr. Brown, who joined Roche in 1942, will be in charge of representatives and branch offices. He is succeeded as San Francisco division manager by Lee H. Chambers.

A. M. A. Meeting

The Annual American Medical Association will be held in Chicago June 21-25, with a possible total registration of 30,000 persons.

Dr. Voigt Named Curator

Dr. Ralph F. Voight of the University of Illinois College of Pharmacy has been named curator by the American Academy of Allergy for a collection of allergenic pollen and specimens of all plants producing hay fever throughout the U. S.

Dr. Voigt currently serves as assistant to the director of the Drug Plant Experimentation located at Lisle, Ill.

Van Den Bergh on Danco Board

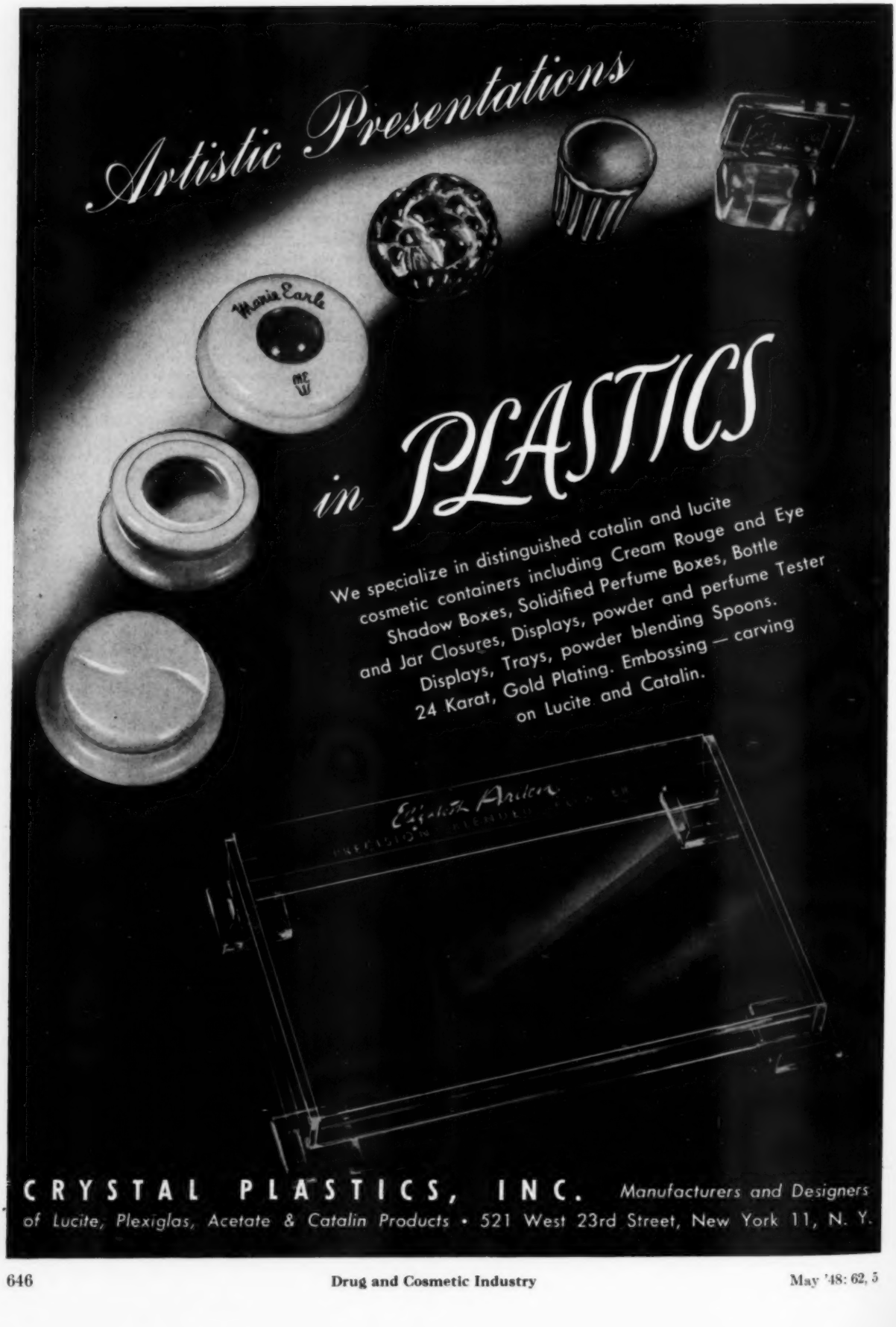
Gerard J. Danco, Inc., at a stockholders meeting has elected Miss M. Van Den Bergh, secretary of the corporation, to the board of directors.

New Firmenich Appointment

Charles C. Bryan, managing director of Firmenich & Co., has made known the appointment of Douglas Graham as technical director of the firm's flavor division. Mr. Graham was formerly a flavor research chemist with Fritzsche Bros., and more recently served as director of research for the Fanny Farmer Candy Shops, Inc.

New N. Y. Q. Plant

The New York Quinine and Chemical Works, Inc., has moved to new and larger quarters at 729 West Division St., Chicago. This new midwest headquarters replaces the company's former St. Louis depot.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A.P.M.A. Golf Winners

The list of winners in the golf tournament held at the American Pharmaceutical Manufacturers Association meeting in Havana is as follows: Winner of the Monsanto A.P.M.A. Cup and low net class A, E. D. Reason, of E. S. Miller Laboratories; Low gross—Fred Gottfried, Merck & Company; Second low net class A—Phillip B. Marsden, Commercial Solvents Company; Third low net class A—Truman R. Fowler, Nopco Chemical Company; Fourth low net class A—Grant Thrall, F. J. Stokes Machine Company; Second low gross—Charles Baber, C. B. Fleet Company; Low net class B—Frank Holt, Becton Dickinson Company; Second low net class B—Paul Robin, Becton Dickinson Company; Third low net class B—Walter R. Nay, Mallinckrodt Chemical Works; Least Putts—C. R. Flint, Flint, Eaton Company; Low net Marine & Biological division—Dr. Charles E. Dutchess, Schenley Laboratories, Inc.; Low net class C—Dr. F. F. Yonkman, Ciba Pharmaceutical Products Company; Second low net class C—Kenneth G. Hewitt, Kimball Glass Company; Third low net class C—E. B. Dennis, Kimball Glass Company; Fourth low net class C—N. F. Storm, Ciba Pharmaceutical Products Company.

Abbott Sales Meetings

Summer sales conferences for Abbott Laboratories have been announced by H. S. Wilkinson, general sales manager. The Central division will meet at the Palmer House Chicago, July 16 and 17; The Easten division at the Waldorf-Astoria, New York, July 23 and 24; and the Western division at the Fairmont Hotel, San Francisco, July 31 and August 1.

Dr. Folkers Named To Academy of Sciences

Dr. Karl Folkers, director of organic and biochemical research in the research and development division of Merck & Company, Inc., has been elected to membership in the National Academy of Sciences

Stieh To Construct Laboratory

William M. Stieh has purchased a four-acre tract of land in Carlstadt, N. J., for the construction of a research laboratory. The new organization will be completely isolated from the New York activities of William M. Stieh & Company.

Schering Appoints Lee and Jurow

Dr. Slaughter W. Lee and Irving H. Jurow have been appointed to the staff of Schering Corporation.

Dr. Lee, formerly director of research

DR. S. W. LEE

of Wallace Laboratories has been assigned to the development of a number of new products, being prepared by Schering's research divisions.

As head of The Schering legal department, Mr. Jarow assumes special duties in connection with Schering's expanding domestic and foreign activities in the manufacture and distribution of pharmaceuticals.

Winthrop Revises Service Staff

Revision of service areas of the Special markets division of Winthrop-Stearns Inc., has been announced by P. Val Kolb, divisional vice president.

Mims With Fair Trade Council

Jown W. Anderson, president of the American Fair Trade Council has announced the appointment of Shannon W. Mims, to head the New York offices of the Council.

For the past three years, Mr. Mims has been on the publicity staff of the American petroleum Industries Committee.

Dowling Appointed Sales Assistant

Arthur L. Dowling has been appointed assistant sales manager of Dodge & Olcott.

Mr. Dowling joined Dodge & Olcott in 1946 and has been in charge of the De Laire perfume department. In his new post, he will direct merchandise sales under vice president Charles O. Homan.

Mr. Dowling served in the Navy for six years, where he had command of two ships, held the rank of lieutenant commander and was awarded the Navy Cross at Okinawa.

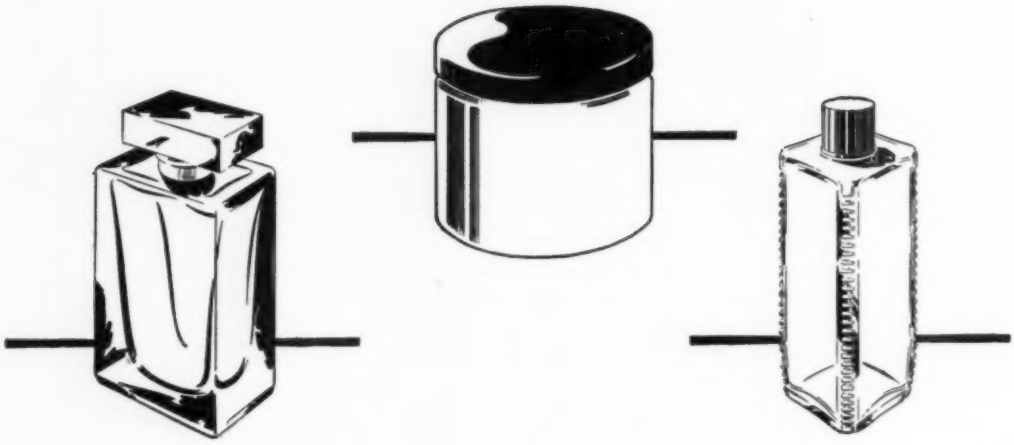
New Triangle Package Plant

In line with Triangle Package Machinery Company's expansion program work has been started on the new Triangle plant, which will have double the present facilities of the two combined Chicago plants.

The new location will be at 6630-6650 West Diversey Blvd., Chicago.

F. W. Alford, left, and L. W. Tuttle have joined the new sales staff of the cosmetic division of the Plume & Atwood Manufacturing Company, Waterbury, Conn., according to an announcement by Lawrence W. Hotchkiss, manager. The firm is one of the country's leading manufacturers of brass goods.

CARR-LOWREY GLASS CONTAINERS



For more than 59 years Carr-Lowrey has been supplying many leading manufacturers with glass containers of exceptionally fine quality.

Carr-Lowrey Opal Jars bear an enviable reputation for uniformity and color. Their brilliant whiteness makes them stand out wherever displayed.

In flint glass, both handmade and machine made, Carr-Lowrey containers are widely accepted as a standard of excellence.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. • *New York Office:* 500 FIFTH AVENUE • *Chicago Office:* 1502 MERCHANDISE MART

CSC Appoints Woodfill

Commercial Solvents Corporation has appointed C. R. Woodfill as manager of the company's industrial chemical division, with headquarters at the New York office, 17 E. 42nd St.

Mr. Woodfill was formerly manager of the St. Louis district sales office. This position has been filled by Frank A. Embrey.

Orbis Catalog

A new 28-page catalog and price list has been issued by Orbis Products Corp., 215 Pearl St., New York, and is available upon request. The booklet covers the complete line of Orbis essential oils, drugs, gums, perfume bases and insecticides.

Agident Co. Formed

Ernest A. Wilcox, president of Advertising House, Inc., has announced the formation of the Agident Company at 670 Lexington Ave., N. Y., with himself as president.

The company is putting on the market a new product for the dentifrice field called "Freshenit," and will be used to clean false teeth.

Pickel Named Project Leader by Evans

Frank D. Pickel, Ph.D., former technical director of The Vitamoil Laboratory and research chemist for the International Vitamin Corporation has been appointed a project leader for the Evans Research & Development Corporation.

Niles Joins Owens-Illinois

Philip B. Niles has been appointed as public relations director of the Owens-Illinois Glass Company. He will be located at the company's general offices in Toledo. Previously, Mr. Niles was connected with the American Water Works Company in the capacity of vice-president.

Enjay Shifts Personnel

Reassignments of field representatives in various sales groups have been announced by Enjay Company, Inc.

In alcohols and chemicals sales, John E. Devine, mid-west division manager, and Charles L. Brooks move to New York from the Chicago office. Robert A. Short joins the mid-west division from the Philadelphia area where he will be succeeded by Norman G. Baker.

Ralph E. Dorland

Ralph Erskine (Doc) Dorland, manager of the New York office of the Dow Chemical Company, died May 14 in the New York Hospital of a cerebral hemorrhage which he suffered in his office about noon a few hours prior to his death. Born in Elyria, Ohio, 68 years ago last August 22, he graduated from Polytechnic Institute, Peoria, Ill., in 1899, and received his Ph.G. from Purdue University in 1901. He was engaged in the retail drug business from 1901 to 1914, and was professor of chemistry and pharmacy in Green's School of Pharmacy, Indianapolis, from 1915 to 1918. He joined the Dow Chemical Company at Midland in 1918 as manager of pharmaceutical sales, and in 1919 he came to New York to open Dow's New York office and to establish Dow in the East.

In 1902, Mr. Dorland married Edith E. Green, who died in 1944. In 1947, he married Julia A. Reuter, who survives him. Four sons from his first marriage also survive him, Grant A., founder of MacNair-Dorland Company, and now of Lexington, Ky.; Wayne E., of MacNair-Dorland Company; Jack A. Dorland, of the Dow Chemical Company; and Ralph E. Dorland, Jr., of San Francisco.

Mr. Dorland was a founder of the Salesmen's Association of the American Chemical Industry and served as its president during two widely separated terms. He was past chairman of the Drug, Chemical, and Allied Trades Section of the New York Board of Trade.

Fritz Stockelbach

Fritz E. E. Stockelbach, president of Fries Brothers, Inc., died April 26 in Montclair, N. J., he had been a member of the company since 1923.

Hugo Bartold

Hugo H. Bartold, director and vice-president of Norda Essential Oil & Chemical Company since 1925, died May 8, at the age of eighty-five.

Mr. Bartold was in charge of the Mid-West territory for Norda and had resided in Chicago for more than fifty years representing the perfume raw material industry.

Walter E. Cornell

Walter E. Cornell, laboratory assistant of Fritzsche Brothers, Inc., died in Kings County Hospital, Brooklyn. He was sixty-one years old and had been associated with the organization for thirty years.

Fred Morrison

Fred A. Morrison, 41 years old, advertising manager of George A. Breon Company, Kansas City, died at Youngstown, Ohio, April 15. He has been in failing health for several months and death followed an operation.

Mr. Morrison had entered the employ of the Breon Company as a salesman in 1938, became district sales manager, and served during the war as interim general sales manager.

Mrs. Newcomb

Mrs. Lida W. R. Newcomb, wife of Dr. Edwin L. Newcomb, executive vice-president of the National Wholesale Druggists Association, died April 6 at her home in Montclair, N. J.

George Herrick

George Leslie Herrick, retired president and vice-chairman of the board of Rubberset Company, died at Doctors Hospital, New York, April 26. He was sixty-two years old.

A native of Lynn, Mass., Mr. Herrick served in World War I and became connected with the Rubberset Company in 1934 retiring in 1947 as vice-chairman of the board. He is survived by his wife and two daughters.

E. Hugh Long

E. Hugh Long, former vice-president in charge of sales for Sharp & Dohme, Inc., died April 20 in Philadelphia. He was 63.

Mr. Long, who retired because of ill health in 1945 started as a sales representative in 1906 for the H. K. Mulford Company, which later consolidated with Sharp & Dohme.

J. T. Stebe

John T. Stebe, sixty-nine, retired vice-president of McKesson & Robbins, Inc., died May 4, after a long illness. He lived at 25 5th Ave., New York.

Mr. Stebe was born in 1879 and attended St. John's University. He joined McKesson & Robbins in 1893 and became vice-president in charge of the export department in 1924, traveling extensively throughout Central and South America. He retired in March 1943 after fifty years with the company.

Surviving are a daughter and two brothers, Dr. Louis and Charles Stebe. Mr. Stebe's wife, Maria Unrath Stebe, whom he married in 1918, died in 1943.

James O'Connell

James O'Connell, Jr., branch manager Boston Office of Innis, Speiden & Company, and with the company since 1910, died April 6. He was 59 years old.

Save WITH MACHINE BUNDLING

Machine bundling is being used by more and more concerns because of the striking savings it makes over packing goods in costly made-to-order boxes.

The machine will bundle a dozen, or any desired number of cartons coming within its size range, and is adjustable for bundles of different sizes. It is suited not only to products in cartons, but also to products in tubes and bottles which are inserted in cartons. A "collector" can be supplied to assemble the packages in a variety of groupings – one, two or three layers.

Using tough kraft paper, firmly sealed, the machine makes a bundle that is surprisingly strong. Printed end-labels are attached automatically.

Savings on packing material alone run as high as 60%, and the labor savings amount to thousands of dollars annually. Being lighter than cardboard, the bundle costs far less to ship. Less space is needed for storing rolls of paper than is required for bulky boxes. And since one machine will make 8 to 24 bundles per minute, depending on size, there is also a saving in factory space formerly required for hand packers.

Any way you look at it, machine bundling is a real money-saver. So why not investigate what it might mean to you? Our nearest office will be glad to furnish complete information.

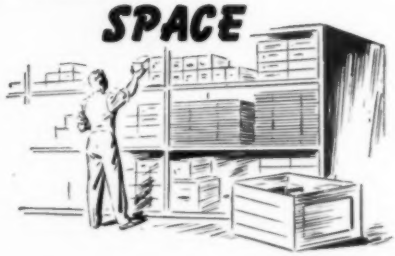
PACKAGE MACHINERY COMPANY • Springfield 7, Massachusetts

NEW YORK CHICAGO CLEVELAND ATLANTA DENVER
LOS ANGELES SAN FRANCISCO TORONTO

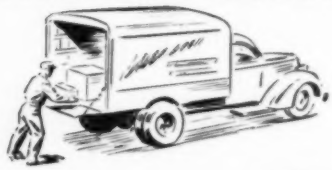
...ON LABOR

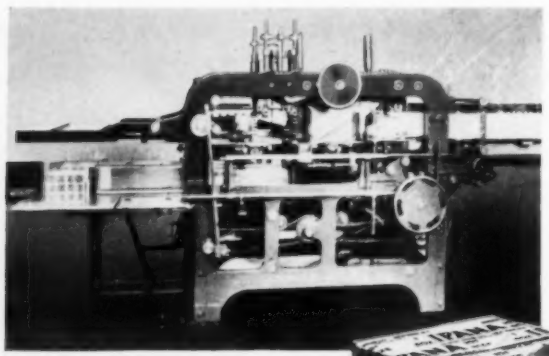
...MATERIALS

...STORAGE SPACE



...SHIPPING COSTS





MODEL F-10
BUNDLING MACHINE

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By FRANCIS CHILSON
Industrial Consultant

The Women

Much has been said and written about maintaining morale. Unfortunately, morale generally is regarded as the effect of conditions existing only *within* a given organization. Little or no recognition has been given to the external conditions that strongly influence morale, such as a man's social circumstances, his family life, and, particularly, the attitude, pride, ambition and personality of his wife. Virtually no study indeed, has been devoted to the enormously important part wives indirectly play in the success of the organizations with which their husbands are associated. Profits come as well from good morale as from profitable sales. The production of profitable ideas is inspired by good morale, and morale in turn is often made or broken by the attitude and actions of men's wives. Very often indeed a misfit wife has broken the morale not only of her husband but also that of his entire organization.

Up to the present, employee welfare work has been confined within organizations. It should be extended to include families—wives especially. A very wise executive told me recently that whenever he has occasion to employ a man for a key position he makes a point of interviewing the man's wife, also. Without seeming to do so, he makes a very careful inquiry into the individual's home life, just to be sure that the man's wife will fit into the social group of which his business is the heart. This is done on the common-sense theory that a man's wife and his home life have much to do with his effectiveness.

My work places me in a position where I frequently am witness to the manner in which unwise, selfish, over ambitious or catty wives interfere with their husbands' progress without realizing the effect of their actions. For instance, it frequently happens that a wife will not permit her husband to accept a promotion simply because it involves frequent traveling or moving to another town where she will lose daily contact with her friends and relatives—especially her mother. I've seen men get themselves "in Dutch" because their wives needled them into making demands for pay increases or promotions at the wrong time. I've known of cases where wives got their husbands into deep trouble because they gossiped about confidential company information which their husbands were foolish enough to disclose to them. Like men, women gossip, incautiously, and gossip can corrode morale and disturb an entire organization. Every plant has a grapevine and the leaves on the grapevine are the wives of the men who form the organization.

The women—God bless them—can be angels. Often they not only sustain and stimulate a man's morale but frequently keep him from doing the wrong thing when he loses his temper and perspective over disagreeable situations that arise at work. Women can be felines too, with claws as sharp as needles. When they use their claws on the wrong woman—or man—all hell can break loose.

The wife of Joe Doakes, the head of the sales department, thinks she's as good or better than "that fat thing, Millie Smith," who happens to be the wife of the general manager. And Mrs. Doakes at the first opportunity will, with a sweet smile, stick her sharp, hidden claws into Mrs. Smith, who, with an even sweeter smile, will dig back again. That night when Bill Smith comes home tired from the office, his wife will tell him in no uncertain language that she played bridge with that "nasty cat, Mrs. Doakes:" she will magnify her injuries and tell her husband that she was grossly insulted, and she doesn't understand why he employs a bum like Joe Doakes anyway, *etcetera, etcetera, etcetera.*

Later the Smiths give a cocktail party and fail to invite the Doakes, and the omission is resented as a mark of social ostracism. When Mrs. Doakes hears about the party to which she has not been invited, poor

STOKES
TABLET MACHINES

FOR SMALL SCALE OPERATION OR EXPERIMENTAL TABLETTING

Eureka single-punch bench model Tablet Machine

or

"BB-2" Rotary Tablet Machine

HIGH SPEED QUANTITY PRODUCTION UP TO 1500 TABLETS PER MINUTE

Whatever your tabletting needs — whether for small production or experimental and research work, or for high speed, large scale production — there is a Stokes Tablet Machine to meet them.

For over 50 years Stokes has designed and built machines for compressing pharmaceutical and other tablets — machines which, today, are standard equipment throughout the world.

These machines embody many unique features. Typical are the Automatic Excess Pressure Release on rotary and larger single-punch models; Anti-Capping Devices; and means of producing ball-shaped and perforated tablets.

Write for Catalog No. 480-T describing Stokes Tablet Machines, auxiliary equipment, and technical and laboratory facilities available.

F. J. STOKES MACHINE COMPANY
5932 Tabor Road, Philadelphia 20, Pa.

F.J.Stokes PHARMACEUTICAL EQUIPMENT FJS Est. 1895

Joe Doakes who is trying his damndest to do a good job for the company, gets the works. He gets the works morning, noon and night, and if he's not a strong enough character to shut his wife up, he goes to work with a grudge in his soul and a chip on his shoulder. His morale suffers, and, like the one rotten apple in a good barrel, his impaired morale corrodes the morale of others with whom he is associated.

American management should carefully study the social factors that affect morale and indirectly affects profits. Analysis of the reasons why three out of five marriages end in divorce invariably reveals conditions traceable to the man's economic pursuits or the social circle of which he is unavoidably a part. No man can give his best to the organization that employs him if his home life is disturbed or disrupted. While there are limits to the degree to which an organization can try to influence the private lives of its members, there are many little things which every organization can do which help to maintain tranquility in the homes of its personnel.

Businessmen should recognize that every organization is, first of all, a human organization and is influenced for good or ill by the same circumstances that influence the individuals who comprise it. Recognition that a business is a social organization should be followed by a very careful analysis of the families involved in it. Personnel activities should comprehend the needs of families and additions made to existing social groups should be made with some consideration as to how the new additions will fit into the existing social pattern. This is particularly important in the smaller cities and towns where people live and work so closely together. While it is not possible to revolutionize an existing social pattern, it should be remembered that that pattern continually changes as personnel changes. Only a small percentage of the people in any given organization remain with it ten years or more. This old guard forms the core of the economic and social circle and additions to it should be compatible. Generally speaking, most of the people who last with a given organization for ten years or more, do so not only because they are competent but also because they like each other. It becomes, therefore, the duty of top management insofar as is possible to make sure that additions made to the central group are congruous.

If business men, without being intrusive or paternalistic, made a serious effort to create harmonious social groups among their workers it seems inevitable that the divorce rate in this country would go down as a consequence and, moreover, profits per unit of invested capital would undoubtedly go up. Without wishing to labor the point too much, I might add that the conclusion of the great studies that went on at the plant of the Western Electric Company proved that production will go up or down, depending on the liking of workers in particular groups for each other. And this liking is all too often determined by their wives' opinions—and especially their pride.

Routine

From time to time in this department, I have expressed venomous dislike of routine, especially useless routine and paper work. Right now my biliousness is caused by the enormous amount of time that executives waste on their mail. Really important letters have to be answered, of course. You cannot run a business without correspondence. But it should be limited as much as possible. One executive told me recently that four hours of his working day were required to read, dictate and edit his mail. To me this represents a waste of three hours and indicates a lack of good reading and writing technique.

The blunt fact is that the average executive cannot read rapidly and cannot dictate properly.

I say he cannot read because he's never taught himself to read by sentences and by paragraphs. Mentally, he pronounces every word he reads, and in consequence spends a lot of unnecessary time reading his mail. When he has to read a report he's at it for hours. Because executives have not taught themselves to read properly, I've seen many of them take bags full of reports and papers to study at night. This is why deaths from heart disease are increasing so rapidly.

We have courses for employees and foremen; why can't we have courses for executives—speed reading and dictation courses?

Not only does the average executive not know how to read, but in even more cases he doesn't know how to dictate. He reads his mail and then, without organizing his thoughts with respect to each document, he begins to dictate. As he dictates he interrupts himself, stops for more or less prolonged periods of time while he cogitates what he's going to say next; he walks up and down his office or looks out of the window, and then he frequently requires his secretary scratch out all she's written and he starts over again. Thus, he is not only wasting his own time, but that of the secretary as well.

When finally he has gone through his mail and dictated the necessary responses, he gets on with the day's business and then, about three or four o'clock, he begins editing his mail, frequently changing the letters altogether, causing them to be re-written.

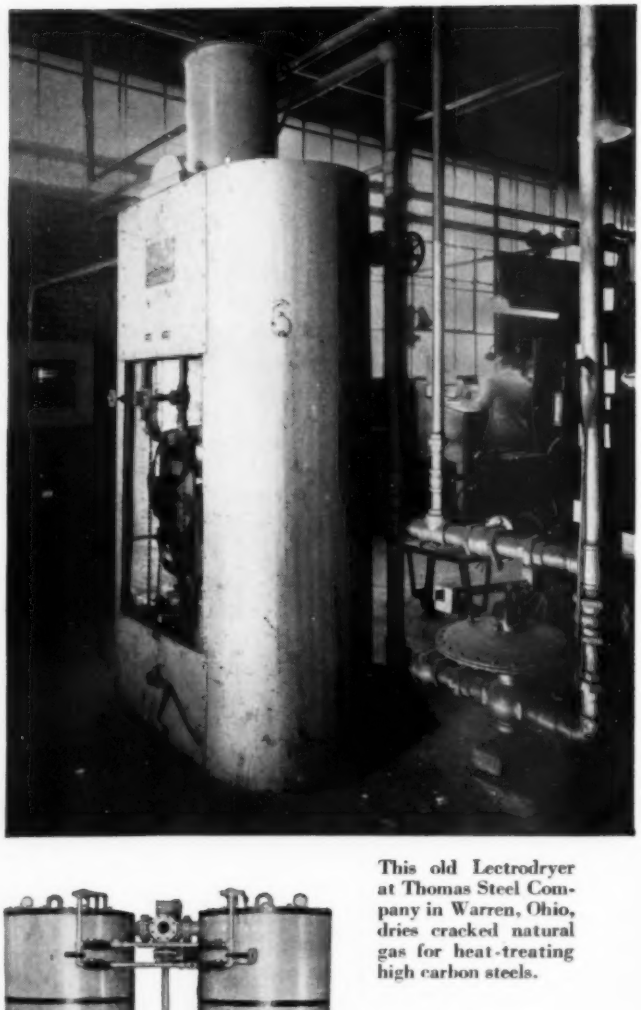
It is for this reason that I have always favored stenographic pools, and the use of dictaphones or similar equipment. When a man takes a half an hour to write a letter, he may in such cases be wasting company time, but he's also wasting the time of the typist.

An executive should organize his thoughts before he begins to dictate, possibly making short notes on his correspondent's letter. When he dictates, it should be a short, snappy performance, and it should not be necessary for him to re-read the mail or even to sign it. A competent stenographer can sign his name, and if the typist who does the letter is competent, there will be few, if any, typographical errors in it to worry about.

It has been my observation that most of the mail

The "Original" Lectrodryer

IS STILL ON THE JOB



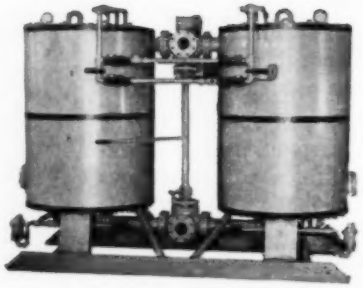
Installed in 1932, this Lectrodryer was the first to go into commercial service. Its task was drying cracked natural gas for heat-treating work. Thus Thomas Steel Company pioneered in metallurgy, just as Pittsburgh Lectrodryer Corporation has pioneered in DRYing.

Today's Lectrodryers are streamlined in appearance, automatic in operation, highly efficient. But that first machine was basically right—proved throughout the years by thousands of Lectrodryers all over the world, in dozens of industries where DRYing is a vital operation.

Your problem may be one of air DRYing—maintaining constant humidities in working or storage areas to prevent contamination of products. It may be gas or organic liquid DRYing—keeping operations on the beam by enabling you to work with materials of known moisture content. Lectrodryer engineers will help you find the answer.

Tell your drying problems to Pittsburgh Lectrodryer Corporation, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Glebe, Sidney.



This old Lectrodryer at Thomas Steel Company in Warren, Ohio, dries cracked natural gas for heat-treating high carbon steels.

This modern Lectrodryer dries controlled atmosphere gas.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

LECTRODRYER

REGISTERED TRADEMARK U.S. PAT. OFF.

that comes to the average top executive's desk shouldn't be placed there at all. It's not that important. Many times have I noticed that an executive will go through his mail quickly and assign it to subordinates. Obviously the subordinates should have had it in the first place. As a matter of fact, with the exception of personal or confidential mail, an executive never should see any of the incoming mail at all. It should be handled entirely by subordinates and correspondents who, if they cannot handle a situation disclosed in the mail, can then refer it to the boss.

Don't think I'm referring to only minor executives. I know many company presidents who waste a lot of valuable time unnecessarily reading mail and editing letters. It's a hell of a note if one can't write a letter without having to re-read it to make sure one's thoughts are clear and have been transcribed properly.

Referring back to the art of rapid reading, it has always struck me as remarkable that since so much time is wasted in industry in reading and writing, that printing has not been scientifically standardized as to type size, and spacing of lines and the size of paragraphs. If, for instance, all typewritten letters used the same size type, the same spacing, the same width and depth of paragraphs, reading could be accelerated.

The limitation of the written word is that it does not instantly convey a picture. The average person can glance at a complex photograph or graph and in a flash of a second, comprehend its meaning in detail. Yet because of bad educational methods, we cannot glance at a paragraph and instantly comprehend its meaning. We must pick it apart piecemeal, word by word, pronouncing each word mentally as we go.

Yet there are men who can read by sentences; there are others more advanced who can read by paragraphs, and there are still others more advanced who can read by entire pages. Reading this way is an art which can be acquired through concentration and practice. There are many men in the trade who can read this way, and what one man can do, another can, assuming his eyesight is good and he can concentrate.

Rapid reading means quicker comprehension and quicker comprehension saves time. Those who need it should individually train themselves to read rapidly, and if they are in a position to do so should persuade other executives and correspondents to do likewise.

Employee Training

It is a commonly accepted doctrine that when you put a new employee through a course of training, he is "broken in." Actually, employee training should never stop. After the employee learns to do the work he has been hired for his training should go on continuously. This advanced or continuous training should really be a form of indoctrination designed to maintain morale and to make the worker understand clearly every phase of his own work as well as the work of his deparment in its relation to the business as a whole. It is not easy to learn and it's still more difficult to teach. We are all too prone to assume that because employees apparently understand what we tell 'em, that they actually do. Sometimes we know so much about a subject ourselves that we take it for granted that the other fellow knows a lot more about it than he really does and hence we feel no preliminaries are necessary. Many of us are intellectually impatient and we don't like repetition. We assume that if we tell an employee something once, that's sufficient. It isn't. To get ideas across requires endless repetition of simple statements and directions.

Words, however simple they may be, do not always convey the same meaning to everybody. Quite apart from differences in racial and sectional meanings, ordinary simple words have slightly different meanings to each of us. In reading formulae, I often wonder why more mistakes do not occur in manufacturing. How many times have I seen "sieve through a coarse sieve." What's a coarse sieve? 20 mesh? 14 mesh? 6 mesh? 4 mesh? "Bring it to the boiling point," is another. The boiling point to one man is that point at which the first hint of vapor appears; to another it means the state when the liquid begins to bubble in a lively manner but doesn't actually splash out of the kettle. "Agitate for a few minutes" is another common direction. To some men, especially in the North, a few minutes means 180 seconds. In the South where they take things easier, it might mean 180 minutes.

To sum up: all instructions should be clear, concise and understandable whether oral or written. Every document an employee sees should in some way help to improve his training. Every moment of a supervisor's spare time should be devoted to teaching every employee how to do his work better and more easily.

Chin Li Degener

The other day I met the barge master of the Gowanus Canal in Brooklyn, and he told me that he was convinced that Fritz Degener of the Heyden Chemical Degeners of Chicago is actually Chinese.

I said, "What proof have you got?"

He said, "Haven't you ever noticed how his eyes slant sometimes?"

"Yes," said I, "I've noticed that his eyes slant—sometimes one way and sometimes another, but I never thought it was from the effects of his nationality." I said further, "How could Fritz be a Chink when he has such a broad Irish accent?"

Said the barge master, "That accent is merely a ruse to disguise his Chinese accent. You know his penchant for night shirt buttons. That's proof that he likes laundry, and besides, he's fond of singing 'Chin Li, China Boy' at two o'clock in the morning."

"Well, I'm obliged to admit," said I, "that there have been times when I thought that Fritz might be an Indian, but I can convince you beyond all question of doubt that he's not a Chink."

"How's that?" asked the barge master.

"He doesn't wear a queue!"

Cooperative Buying

I have long advocated in this department more cooperation among competing manufacturers in functions that are common to all, such as quality certification, pool shipping and cooperative buying. It pleases me to see that one of these ideas indicated by the soap industry, which is planning to establish "a New York buying office" through which member companies will purchase basic supplies, thus obtaining for each the benefits that may be derived from large scale procurement. As I mentioned before, large department stores have had cooperative buying offices for many years and experience has shown that tremendous economies are possible through them.

In order to make such a service available to small manufacturers throughout the United States and abroad, some friends of mine have formed the Drug and Allied Industries Engineering Service, with offices at 598 Madison Avenue, New York City, N. Y., Plaza 3-3228. This organization operates on a commission basis. The guiding spirit in this organization has had twenty years experience in the drug and cosmetic industry as purchasing agent and is familiar with all types of raw and packaging materials and equipment. An effort will be made to develop the foreign field especially. It is hoped by the organizers of the firm that as the volume of the office increases the lower prices obtainable through volume purchasers will offset the slight commission charged by the office for its services.

Plant Health Programs

Pointing out that more than nine out of ten companies with health programs have experienced a decline in absenteeism, accident rates and illness since instituting their programs, the Labor Relations Institute, New York, has prepared a checklist of health program essentials for the guidance of its members. Some of the questions are as follows:

1. Have you established a plant dispensary equipped to give employees physical examinations and emergency care?
2. Do foremen send all plant sickness and accident cases to the dispensary, no matter how slight?
3. Is your safety equipment inspected regularly?
4. Does your plant have a program for housekeeping to help maintain safe, healthful working conditions?
5. Do your employee publication and bulletin boards feature articles on prevention of occupational diseases and other health topics?
6. Is accident prevention stressed through supervisory meetings, plant posters and executive letters to employees?
7. Do you cooperate with community accident and disease prevention campaigns?
8. Are checks made on "accident prone" workers so they can be transferred to other jobs?

Rising prices have affected health programs as well as other aspects of the industrial scene, the Institute reports. However, recent figures show that a program can be established for less than $15 per worker per year—only a slight increase over the prewar cost of $12.36. The figure $15 includes the cost of amortizing the initial investment over a ten year period. This investment ranges from $550 to $3,500 for the average small plant, depending upon the number and size of the rooms used, the amount of equipment purchased and the salaries paid to plant health personnel. In most cases the total cost to the company for the entire installation was less than the expense formerly borne by the same firm for industrial accidents alone.

Wherever possible, the small employers in each area should combine to set up a centrally located dispensary, the Institute recommends. This reduces the expense for each company, and usually makes it possible to engage full time services of a qualified physician and an industrial nurse, as well as the establishment of a well-equipped medical center for employees.

Employers should also take full advantage of local community services provided by the city or county health departments. Many of these departments provide free preventive medicine tests for employees and their children.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Markem Machine

The Markem Machine Company, Keene, New Hampshire, has introduced a dial feed printing mechanism which provides greater convenience in handling one and two-color printing when required. As you know, the Markem machines are widely used for imprinting ampoules, and a number of them are in use throughout the industry. This machine has been used for printing a variety of irregular shaped objects, and it is adjustable so as to accommodate various thicknesses of product to be marked.

Ointment Mixer

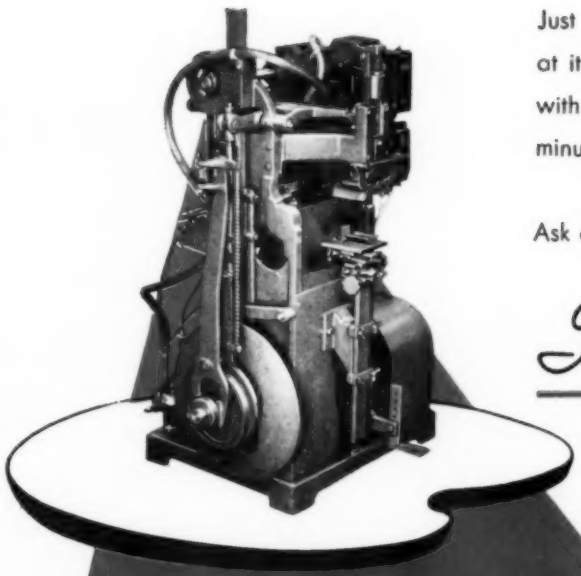
The Black Brothers Company, Inc., Mendota, Illinois, make a variety of mixes of various types, especially for heavy glues. Your attention is called to a small job which would be very useful in laboratories and pilot plants for making small lots of creams and ointments. This machine resembles a small pony mixer, and with it you can mix a batch in an ordinary pail. This machine is made also in 5, 7½ and 15-gal. sizes. Incorporated in this device is a screen fed by a chute so that if you wish to incorporate lumpy medicaments in an ointment base you can do so by dumping the powder into the chute and it will be rubbed through the screen as the mixing proceeds.

LABELING *without glue!*

No moisture to affect paper labels; no continual check on glue consistency.

No morning preparation—no evening clean-up!

Just start labeling the moment work starts, keep at it all day 'till the minute the whistle blows—with vacuum-perfect register—50 and more per minute—and *never* any fuss, delay or drudgery!



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on PNEUMATIC Samco Fillers

MATERIALS HANDLED ON SAMCO JR. FILLER

FLOOR OIL AND FURNITURE POLISH
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INSECT SPRAY
INSECT REPELLENT
MACHINE OIL
TURPENTINE
ANT EXTERMINATOR
POULTRY PRESCRIPTION
LIGHTER FLUID
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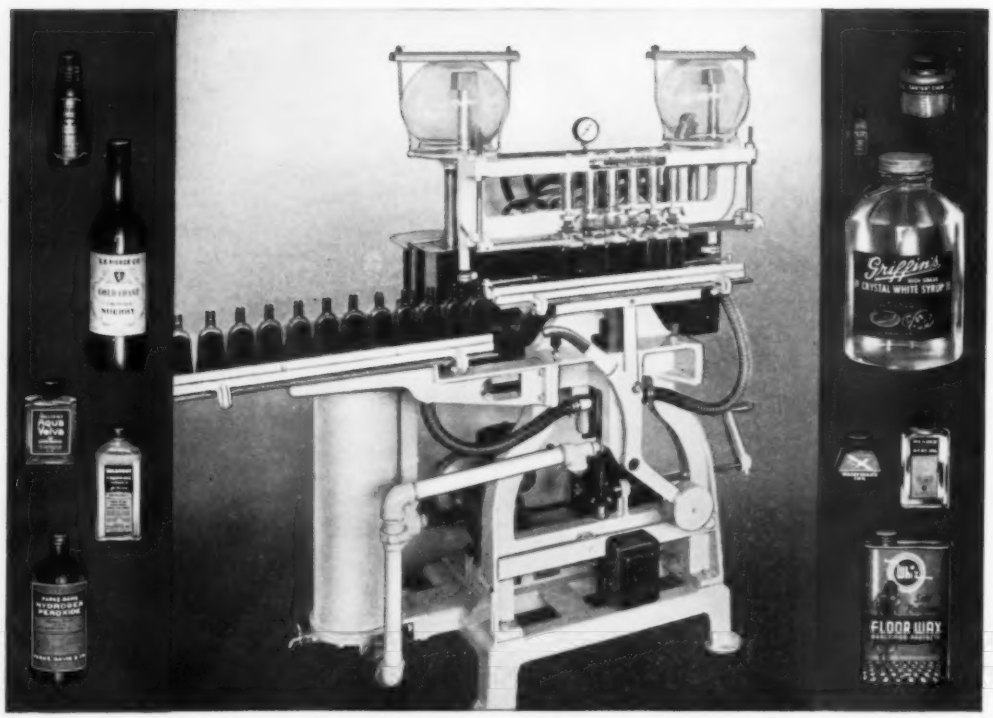


Practically every known commercial liquid has been handled on a Samco Filler at one time or another. Producers of free or semi-free flowing liquids have widely received the Pneumatic vacuum filling process as a clean, accurate system which allows for continuous operation at high speeds.

Where the call is for short runs on many products, change-over time must be held to a minimum and in such production lines, bottlers everywhere have found the Samco Jr. pictured above to be the last word in Filling efficiency.

This semi-automatic machine will handle containers of 1 ounce up to 1 gallon in regular finish or AGST glassware and cans at speeds ranging up to 40 per minute. Extremely flexible, the Samco Jr. may be found in a number of plants where thirty or more products are being bottled in as many as twenty sizes, all on the one machine. It is simple to operate and easily adjusted to new sizes on an average of 10 minutes per change. It was built by Pneumatic to operate at "Lower Cost per Container."

Call in Pneumatic on your bottling problems. Pneumatic's complete bottling equipment includes automatic machines for Cleaning, Filling, Capping and Labeling.

PNEUMATIC SCALE CORPORATION, LTD., 70 Newport Avenue, North Quincy 71, Massachusetts. Branch Offices: New York, Chicago, San Francisco, Los Angeles.

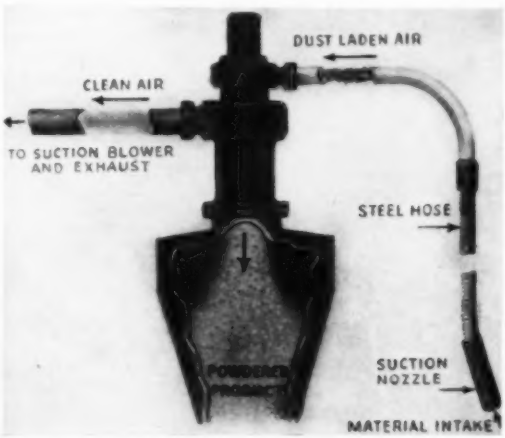
PNEUMATIC **PACKAGING AND BOTTLING MACHINERY**

Over eighty different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping and labeling of containers for liquids and semi-liquids

Powder Transfer Conveyors

All of you who have to deal with fine powders, especially face powder, realize what a job it is to transfer powder from a mixer to a mill or from a mixer to a sifter, or from any piece of manufacturing equipment to a filling machine. Hitherto, most of the available conveyors have not been suitable because of the fact that they required too much cleaning time or could not be cleaned at all. Air conveyors have not been hitherto adaptable because of their size and costly installation. Recently two appeared on the market. The first one, Convair, was described to you recently. The following description deals with a unit made by Airborne Conveyors Corporation, 99 Warren Street, New York 7, New York. It looks like a honey and it has been used for face powder in relatively small batches. It is simple, compact, relatively inexpensive, and it can be cleaned easily.

The Airborne Conveyor works by virtue of a novel separator which removes powder from the air stream down to a minimum size never before considered attainable in a commercial product. The exact particle



diameter down to which separation is possible depends, besides the kind of material, mainly upon operating conditions that is on pressure and volume to be handled.

The company is looking forward to separating particles of less than a micron diameter such as pigments and colloidal graphites. Pneumatic conveyors with conventional automatically cleaned bag filters require receiving stations of such huge proportions that they usually have to be housed in super structures on the roof of buildings.

The compactness of this separator often makes possible complete installation of the conveyor inside the factory and extends the usefulness of such conveyors to very small capacities as frequently required in the drug and cosmetic industry. Particularly suited for charging and periodic replenishing feed hoppers of powdered products machines such as packaging and filling machines, plastic molding, and tablet presses.

Economical even for very short distances such as dustless transporting powders and granular material from floor hoppers, drums, containers and bags to charging hoppers of process equipment on the same floor, wherever it is not desirable or possible to break through the ceiling and feed material from stories above processing floor.

Dust laden or material transporting air enters separator from side. Heavier-than-air particles are forced out by centrifugal action, fall down and accumulate in hopper below to which separator flange is bolted. Material may be delivered directly into processing equipment. Clean air leaves separator on side.

The separators are built to order in sizes ranging from laboratory model to the largest dust collection units. The maximum size is not limited by ability to perform but rather by economic considerations and therefore varies with the kind of application.

The company conducts tests on small and medium sized separators. Prospective buyers are invited to submit their problems of separation and obtain test data.

Semi-Automatic Piston Filling Machine

Perl-Oussani Machine Manufacturing Company, 68 Jay St., Brooklyn 1, N. Y., has produced a semi-automatic piston filling machine which offers a wide range for filling creams, greases, oils, pastes, etc., into collapsible tubes, jars, cans or bottles. A specialty designed precision pump, and a totally enclosed three-way valve guarantee sanitary working conditions, eliminating air pockets that so often plague the filling of containers.

All contact parts are made of stainless steel and non-corrosive materials, that can easily be taken apart and cleaned. A micrometer screw adjustment provides a simple and quick control to have all containers filled exactly with the required quantity, as well as providing a quick change control.

The machines come in two types, power driven model number 700-P, and manually operated model series 700-H.

Floor Sweeper

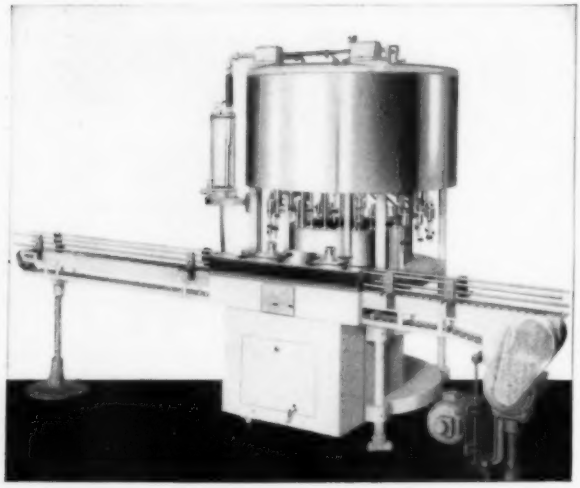
The Parker Pattern and Foundry Company of Springfield, Ohio, manufacture a manually operated floor sweeper which looks something like a lawnmower. It contains a rotary brush arrangement and a collecting tank, and the manufacturer claims that it does not make dust while in operation. Many plants use these for sweeping outside walks and lawns after they have been clipped. The unit is comparatively inexpensive.

Drum Pump

General Scientific Equipment Company, 27th and Huntingdon Streets, Philadelphia, is offering a diaphragm pump which does not have to be primed before it can be used. You merely screw it into a drum or tank and operate the lever. The same outfit also makes a very handy bulb type acid pump for dispensing acids from carboys.

UNBEATABLE FILLERS

One is Fully Automatic. The other is Semi-Automatic. Both have Exclusive Advantages!



THE U. S. ROTARY VACUUM FILLER

Now available in 5 standard models with new improvements and advanced designs. Handle any light or heavy, foamy or syrupy liquids at relatively high rates of speed . . . as high as 300 containers per minute. Fill to hairline accuracy. Automatic protective controls. Highest type vacuum operation. Perfect automatic timing. Variable speed control, etc. Perfect synchronization with other units. A rugged machine for many years of dependable service . . . early makes in use for decades. Write for illustrated "Filler Bulletin" featuring outstanding filling innovations

MODEL B-2 SEMI-AUTOMATIC VACUUM FILLER

Most popular semi-automatic filler in America. Rapid filling of any liquid or semi-liquid. No lost motion, idle machine time or product waste. Fills 2 containers simultaneously. Fills directly from any size storage container up to barrel size. Interchangeable filling stems. Fills AGST and ordinary neck opening containers up to 4" diam. Invaluable to plants of hand-filling capacity. Widely used also in large plants as a stand-by unit. It is portable, plugs into electrical outlet for quick use anywhere. Write for the "B-2 Bulletin."

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The fastest and most flexible machine ever developed for label coding, having a size range from 7/8" x 1" to 8½" x 11", at speeds of 150 to 200 labels per minute. Machine and Numbering Head completely adjustable. Write for complete information.

Exclusive Agent,

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225 Broadway New York 7, N. Y.

Faster Filling

OF BOTTLES, JARS, TUBES AND CANS

Use this Anderson Filler, Model C-2, for liquids, semi-liquids, creams, pastes and greases. Dispensing capacity up to one pint per stroke. Fills practically all types of containers . . . jars, bottles, cans or tubes. The machine is fast, easy to operate, sanitary and easy to clean. Write for prices and full details.

Ask for Bulletin No. 5-24

ANDERSON BROS. MFG. CO.
ROCKFORD, ILLINOIS

Anderson Fillers

HANDLES PASTES, CREAMS, LIQUIDS AND SEMI-LIQUIDS

EPPENBACH HOMO-MIXER MAKES DISPERSIONS WITHOUT INCORPORATING AIR

1. Turbine head near bottom of tank starts a converging horizontal flow which carries sedimentary material into close-fitting rotor vanes.
2. Inflowing "slurry" is violently agitated at high velocity and projected upward toward surface.
3. A submerged baffle-plate deflects the rising current horizontally toward sides of tank, thence flowing downward toward bottom.
4. Rapid down-flow submerges and wets out floating material, including additives being fed into the mix.
5. The entire batch is deflocculated resulting in a perfect dispersion.
6. No surface boil . . . no vortex . . . NO AIR DRAWN IN.

The Eppenbach HOMO-MIXER is built on an entirely new principle. Whereas ordinary mixers create a vortex in the material that pulls in air, the HOMO-MIXER draws only from the bottom of the tank. Entrapped air tends to cause separation and splitting, and frequently oxidizes the product.

Furthermore, the HOMO-MIXER does not require a high head of liquid to give efficient mixing action. It is possible to process material in a tank at a depth just great enough to cover the mixing head. Fits tanks of all types and shapes . . . no clamps required . . . no special angle of installation.

Write for complete details of this mixer—"the only one of its kind." Ask for Catalog No. 402.

Eppenbach HOMO-MIXERS are available in a complete range of sizes for laboratories and production plants. Capacities range from 2 to 2,000 gallon batches from ¼ to 25 H. P.

EPPENBACH, INC.
45-10 Vernon Blvd., Long Island City 1, N. Y.

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Processing Equipment for Over 30 Years

Announcing a New EXACT WEIGHT Weighing Machine for Drugs & Cosmetics . . .

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COMPOUNDING

Here is the new unit drug and cosmetic processors have been asking for . . . a weighing packaging machine for handling hard to handle powders, flakes and crystals in fast, accurate volume production. Complete equipment comprises (1) EXACT WEIGHT Scale to specifications of the operation (2) "Vibra-flow" feeder conveyor with two rate of flow rheostat control (3) Syntron hopper with pulsating magnetic electric vibrator and hopper support (4) EXACT WEIGHT electronic amplifying unit with automatic cut off for main and dribble feeds. With this equipment one single monentary contact push button control starts the fill. It's a new approach to greatly increased output, automatic accuracy and tremendous labor cost savings. Write for complete specifications, available now!

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Exact Weight Scales

THE EXACT WEIGHT SCALE COMPANY
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POLISHING AND STERILIZATION OF PHARMACEUTICAL SOLUTIONS

SELAS STAINLESS STEEL PRESSURE FILTERS

To the left is a Selas Stainless Steel Pressure Filter installed in a stainless steel pipe line with outlet connected to solution receiving bottle —as for clarification, polishing or sterilizing.

This type of Selas Stainless Steel Pressure Filter is equipped with a removable stainless steel pipe-connection assembly on the inlet and a stainless steel rubber hose assembly on the outlet. This construction facilitates direct connections to a solution-receiver, lessening in great degree the possibility of contamination during transfer.

Filtration is accomplished through the Selas Micro-Porous Porcelain filter element especially developed for fine filtration. Elements are available in a variety of porosities for all phases of filtration and are readily interchangeable. They are easily cleaned by either "back" or acid washing.

Selas Pressure Filters are also used for clarification of tap water, for polishing of deionized and distilled water, and for kindred applications in the drug and cosmetic industries.

Complete information and installation data are available . . . write for catalog.

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Brown Automatic Packeting opens up entirely new avenues of distribution and sales. Brown equipment economically packets any dry, free flowing drug product — uniformly and with minimum filling losses. Inquire about Brown packeting — a packaging story in itself.

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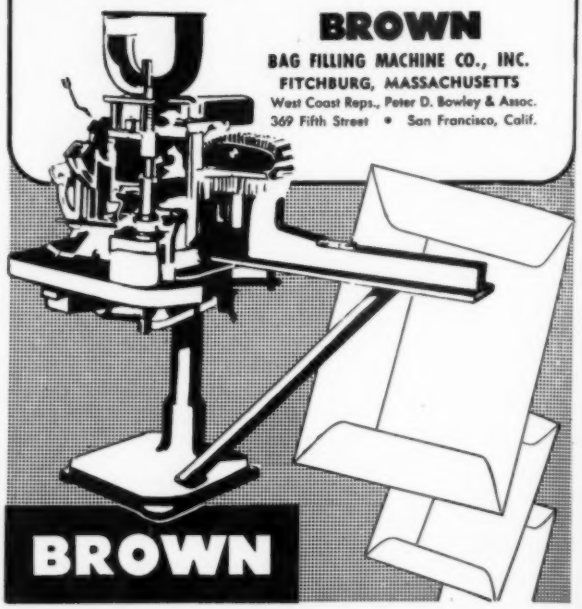
West Coast Reps., Peter D. Bowley & Assoc.
369 Fifth Street • San Francisco, Calif.



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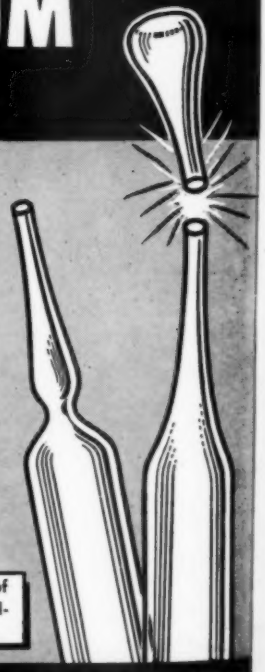
COBY AMPOULES ARE VACUUM FREE

Interior surfaces of COBY AMPOULES are free from the glass dust that ordinarily results from the snipping operation.

Special COBY process liberates vacuum, prior to snipping off characteristic bell-shaped top. Resulting glass particles are then readily drawn up and carried away by dust collectors.



Descriptive circular and price list of regularly stocked ampoules available on request. Write Dept. C.

THE COBY GLASS PRODUCTS COMPANY
Attleboro, Massachusetts, U. S. A.

Get brilliant, uniform clarity

with this low cost, small capacity filter

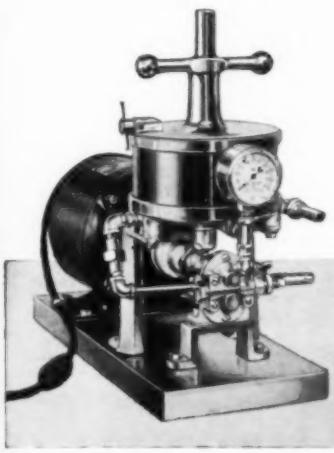
COMPACT
PORTABLE
EASY
TO OPERATE

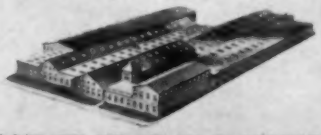
It's the positive filter for all liquids

Here's a small capacity filter that really assures positive removal of impurities. Especially designed for light manufacturing or small batch work, it is of the "*Sealed-Disc*" type, completely enclosed, leak, and drip proof. The entire filter can be taken apart for easy cleaning by simply removing the handle on top. Operation is instant and uniform and is equally effective for clarifying, final polishing or removing turbid matter.

This small model "*Sealed-Disc*" filter has proved itself on extracts, drugs, chemicals, perfumes, cosmetic preparations, animal and vegetable oils and other similar liquids that require a fine degree of clarity. Built of suitable materials to handle all liquids. One of the eight different grades of neutral asbestos filter discs available for use in this filter is sure to give your product the required degree of fineness of filtration constantly. Available in capacities from one to six gallons per minute. Large "*Sealed-Disc*" filters are available in capacities up to thousands of gals. per hour.

Alsop Engineering Corporation
305 Cass Street, Milldale, Connecticut





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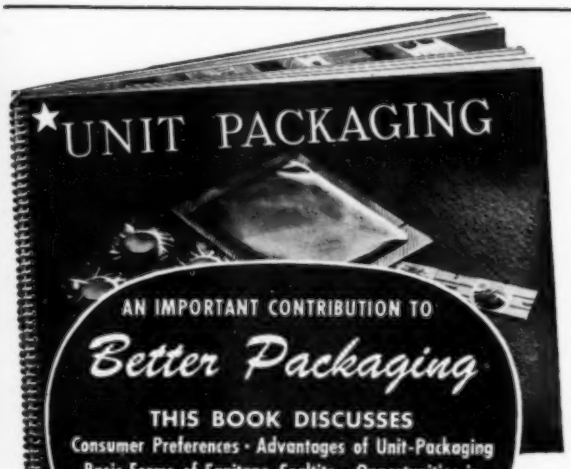
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AN IMPORTANT CONTRIBUTION TO
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THIS BOOK DISCUSSES
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Sanitape-Sealtite is a unique method of packaging pills, tablets, capsules, creams and powders, by which each unit or unit dose is sealed in its own air-tight compartment—assuring convenience, protection and maintained efficacy. Packages, methods and machinery fully covered by U. S. and Foreign Pats., and Pats. Pend.

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..."HAGERTY HANDY FILLER"

- Durable
- Simple to operate
- Moderately priced
- Convenient sizes
- Eliminates spilling
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The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

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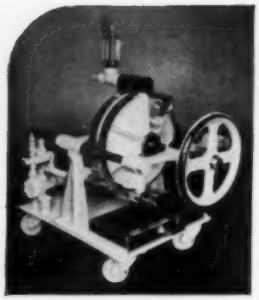

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Here's the ideal Ertel engineered filter for small capacities. Known as Model EBW, it is built with 3 gpm pump. Has single hand wheel for effortless tightening. Whether your requirements can be met with this unit or with a special unit from the complete line of Ertel Filters, Ertel engineers are always ready to help you solve your liquid handling problems. Catalog 15 was recently off the press.

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KINGSTON NEW YORK

New York City Sales Office: 40 West 48th Street, New York 19, N. Y.

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BOTTLE FILLERS • PORTABLE MIXERS • PLASTIC PUMPS

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SERIES 200-25 ROTARY TABLET PRESS

The design of the Series 200-25 Tablet Machine is an outstanding engineering achievement, the culmination of years of experience in building tablet machines. This compact machine incorporates refinements that provide an entirely new standard of performance for this type of equipment.

ARTHUR COLTON COMPANY
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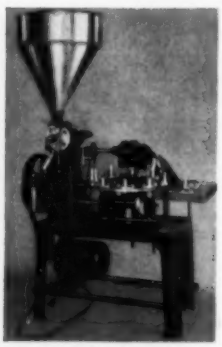
Filling—Measuring—Closing MACHINES



Full or Semi-Automatic Model 705

A Tube Filling, Measuring and Closing Machine to meet the ever-increasing demand for economy, speed and positive production. The vast background of experience and knowledge in this field has resulted in the construction and design of a machine of superior performance.

Built to meet today's needs—with an eye to the production of tomorrow—unrivalled for accuracy, speed and economy.

Also available—Tube Closing Machines
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Inquire About Our: Straight Line Bottle Filling Machines
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Perl-Oussani Machine Mfg. Co.
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Common Sense calls for
Filpaco "Common Sense" DISC FILTER

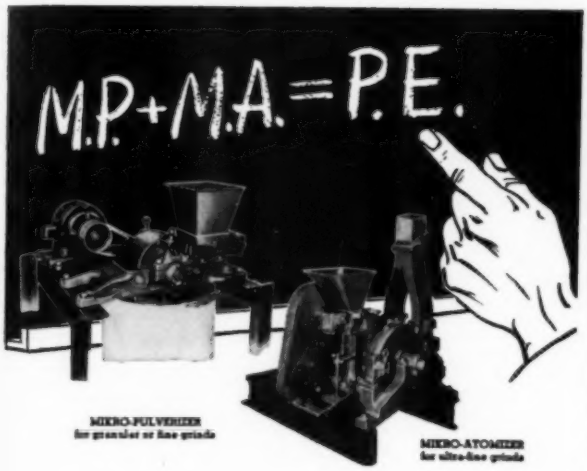
Ideal for:
water, chemicals, oils, acids, solvents, alcohols, medicines.

- Capacity for fairly clear water at 25 lbs. pressure is more than 300 gal. for the first hour.
- Uses inexpensive filter paper or cloth.
- Operates with or without pumping unit.

Write for further information today!

Other "FILPACO" Products:
Filters, stainless steel storage and mixing tanks, fillers, pumps, conveyors, fittings, filter paper, filter cloth, asbestos pads and filter aids.

THE FILTER PAPER CO.
2428 South Michigan Ave., Chicago 16, Illinois



The above equation has a dollars-and-cents bearing on your production problems. It means that MIKRO-PULVERIZERS, plus MIKRO-ATOMIZERS equal Processing Efficiency.

But the equation involves more than a series of custom-built machines. It is the basis of the **MIKRO-Plan for Processing Efficiency** perfected through thousands upon thousands of laboratory tests minutely checked against field performance records in the past 25 years. The MIKRO-Plan has enabled many manufacturers, large and small, to improve quality, increase quantity, decrease power consumption (in some instances as much as 75%) and to eliminate such cost and time-consuming items as screening and classifying, duct work, etc.

The scope of the MIKRO-Plan is almost as broad as Industry itself . . . embracing both wet and dry milling. But the proof of its plus efficiency lies in its conspicuous success in handling products requiring ultra-fineness and perfect dispersion of particles.

It will cost you nothing to find out what the MIKRO-Plan can do for you. Our research engineers, after preliminary tests, will tell you frankly if it applies in your case. Just write for your copy of our Confidential Test Grinding Data Sheet.

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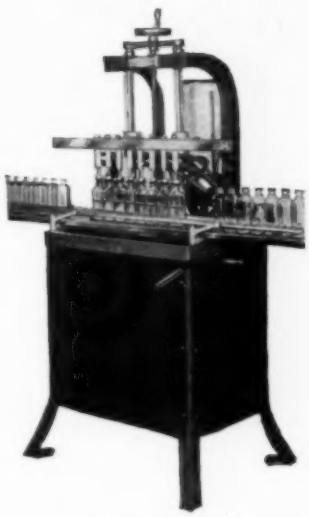
Lower Your Packaging Costs

mrm Universal Straightline Vacuum Filler



★ Automatic overflow
★ Rapid change-over
★ MRM no-manifold fill

All-purpose, versatile vacuum filling machine for thin-to-viscous and foamy liquids. Full range of containers from 1 oz. to 1 gal. in glass, and up to quarts in metal.

mrm Model "B"

Liquid Vacuum Filler

SMALL
— ADAPTABLE —
INEXPENSIVE

4 - 6 Spouts

Mounted on casters, specifically designed for short and varied production runs. Fills a full range of containers from 1 oz. to 1 qt.

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PROMPT DELIVERIES

- **MODERATELY PRICED TO REACH *ALL* MANUFACTURERS**
- ***NO SKILLED OPERATION OR MAINTENANCE NEEDED***
- **PARTS ARE SIMPLE—FEW—INEXPENSIVE**

CONSULT US ON YOUR PACKAGING PROBLEMS

mrm CO. INC. Dept. DCI58
custom-designed and built fillers and conveyors
191-193 Berry Street, Brooklyn 11, N. Y.
EVergreen 7-3936

YOUR TRADE-MARK RECORD

By JOHN H. GRAHAM
International Patent and Trade-Mark Consultant

A Message on Timeliness

All of us have heard of the statesman who was supposed to have been born too soon, but very few of us realize that our products can suffer the same fate! Timeliness is one of the most important keys to sales whether this timeliness relates to the article itself or to the trade-mark which is applied to the article.

A typical example of this came to my attention recently. It quite illustrates the importance of timing with respect to consumer reception. The case in point related to appartus generally connected with foodstuffs, and the inventor in this case was rather unhappy because the war years had prevented him from developing his inventions and he was only just getting started now.

I pointed out to him that before the war people would not have been ready to accept his ideas and there was no need for his ideas then. During the war his ideas might have been received, but they could not have been put into practice. World conditions with respect to food, however, as they stand today are in his favor and coupling this with a modern trend towards new things, he was in a more favorable position today then he was, say, five years ago.

There are many examples of timeliness of this nature. Still in the food business, many of you may know that recently a patent was issued for a way of forcing the color through margarine while still in the package. The old, arduous way in the kitchen of kneading the color through the margarine has taken up many hours of work and during the war, as we all know, much more margarine was used. As far as I am aware, there were no means of obtaining this mixing during the war without the old-fashioned hard-work method.

Now, as you all know, there are bills being debated in Washington which greatly concern oleomargarine. It may be that the federal government will permit margarine to be sold already colored. In some states, such as New York, the state law prohibits this, but in other states the law may not stop sales of margarine already colored. Thus on the face of the facts known to me, the particular patent for the means of forcing the color through was, unfortunately, not timed just right.

Timeliness of this nature does not necessarily apply to patented articles. It obviously applies to any article which is to be sold to a consumer or user, and in the same way it applies to a trade-mark for a known product or for a new product.

Let us take permanent waving of hair as an example since this is somewhat in our industries. Back around 1938 Mr. H. P. Willat was performing some type of cold permanent waving, namely, he was causing permanent waving of hair at relatively low temperatures. Yet cold waving of hair in various forms is only just coming into being and has only been active since the end of the war to any great extent. Granted that war conditions may have been one of the reasons which prevented the full development of cold waving, it may equally be a fact that conditions in about 1938 to the start of the war were not such that the public was ready for cold waving.

We were then just coming out of a depression and were also in the more or less quiescent period between the two wars. Many systems of permanent waving of hair using electricity and machines of all sorts had been provided over the years before, and then Sales Affiliates, amongst others, started the machineless type of waving using chemical heat. Great improvements were made in the heating pads and about the time of the earliest cold waving, the exothermic heating pads had arrived at high quality and were safe in use. It is, therefore, questionable that the buying public would have been too ready at that stage to try something new on any large scale since they were just getting used to the choice between machineless permanent waving and a machine wave.

After World War II, however, there has been definitely recognized a spirit of experiment and a desire for newness and with the various improvements in cold waving within the last few years, it appears to have reached a steady point of success to the particular trade.

Thus again we have this question of timing which may make or break a product. An equally interesting illustration is leg make-up which might be stated to be the cosmetic industry's answer to the shortage of stockings. Before this shortage it was known and used to some extent, but with the shortage the production became timely and immediately went into great volume of sales.

In the same way a new trade-mark will stand much more chance of success if it is timely. It is not to be stated that either a product or a trade-mark which does not have this property must automatically fail. There are many

other points to be considered in the origination, for instance, of a trade-mark name, but it is a fact that if it is a good trade-mark from other considerations, and also has this factor of being up to the times, it will be more desirable as a trade-mark and more likely to fulfill its function of assisting the sales of goods.

Let us take an example of a trade-mark which has been registered in many classes of goods recently and which possesses this property of being in keeping with today. The word "Atomic" has been registered as a trade-mark within the last two or three years for a large number of different goods. Before World War II most of us knew little about atomic energy. In our chemistry days we were taught about atomic weights and we knew what an atom was, at least by the definitions given to us. Thus at that time, say some seven years ago, the word "Atomic" as a trade-mark would have had little significance.

Today, very few people are unfamiliar with atomic energy and many of us have at least attempted to get some idea of what nuclear energy might be. The degree of success of our knowledge, of course, has nothing to do with the fact that the word "Atomic" today really means something. Whether or not this word is good as a trade-mark is for the moment beside the point. On some goods it might be an extremely good trade-mark. It denotes power; it denotes tremendous energy; it denotes tremendous action. It does carry one major attribute, however, and that is its genuine timeliness, its appropriateness to the moods and knowledge of today.

Equally with the use of the word "Atomic" are the various other marks which have been based upon famous plays, books or movies. For example, CAROUSEL, FOREVER AMBER, ZIEGFELD FOLLIES, BODY AND SOUL, MRS. MINIVER ROSE, BLOSSOM TIME, THE GLASS MENAGERIE, and SHEHERAZADE have all been utilized as trade-marks in our own industries broadly and these are obviously marks which must be considered timely.

I do not contend that a mark should be chosen solely for this. As I have explained in past articles there are many other factors which govern the choice of a trade-mark and make the difference between a good mark and one which will not be successful. But where a choice comes between two marks, presumably equal from every value or characteristic except for timeliness, the one that has it is more likely to be a success. I am particularly referring here to new marks. Old marks which have worn well through the years and have reached a position of prestige by virtue of their use and quality of the goods have obvious attributes even if today they may not be considered up to date. They carry with them some of the past and are often solidly entrenched in the minds of the consumers. Even there, however, many of the owners of such old marks have turned to repackaging in order to bring their goods into today's limelight while carrying forward the prestige of their long-established name.

That there is a definite cyle or time association with respect to trade-marks is proven by the various fads we have gone through from time to time. You will recall we went through one cycle when everyone was trying to spell everything backwards and many marks of this sort were applied for. Then for quite some years before the war it was all the rage to use French words for trade-marks and it seemed that the English language was practically forgotten. For a while this trend disappeared, but it is tending to come back again although now both the French and English words are usually registered. Other trends or fads in your particular industry will come to your mind readily of you think it over.

I finally point out that timeliness in the way in which I have defined it is created by two different things. The first is by competition since a trend can be caused by competing goods or by a new approach in trade-mark selection. The other thing is what might be called the passing show which is controlled by public opinion. Obviously, other industries such as clothing, footwear and the like will by their fashions act to control the fashions of the cosmetic and toilet goods industries.

Act of 1946

The following Trade-Marks have now been published as re-registered under the above (Lanham) Act and can be opposed.

C X—VI—529,809
Newville Rea, (Getzum Pro.) Sumner, Wash.
Ser. July 28, 1947 D. U. June 5, 1947

Chanson D'Amour—VI—B—526,640
U. S. Rubber Co., N. Y., N. Y.
Ser. July 5, 1947 D. U. Jan. 1939

Cinderella—VI—CFS—530,435
John Riddick, Jr., Memphis, Tenn.
Ser. Aug. 4, 1947 D. U. Apr. 9, 1945

Cue—VI—HK—529,235
Colgate-Palmolive-Peet, Jersey City, N. J.
Ser. July 23, 1947 D. U. June 30, 1939

Elle Elle—VI—B—530,212
Lucien Lelong, Inc., Chi., Ill.
Ser. Aug. 1, 1947 D. U. Oct. 1, 1937

Flawless—VI—C—532,223
Richard Hudnut, N. Y., N. Y.
Ser. Aug. 23, 1947 D. U. July 25, 1947

Fountain Spray—VI—BC—535,080
Al Rosenfield, Inc., N. Y., N. Y.
Ser. Sept. 19, 1947 D. U. Sept. 9, 1947

Liril—VI—K—532,143
Lever Bros. Co., Cambridge, Mass.
D. U. Feb. 26, 1947 Ser. Aug. 22, 1947

Luna—IV—M—527,686
Procter & Gamble Co., Cin., Ohio
Ser. July 5, 1947 D. U. Aug. 29, 1911

Negligee—VI—BCH—527,849
Consolidated Cosmetics, Chi., Ill.
Ser. July 5, 1947 D. U. June 20, 1947

Nu-Youth—VI—C—532,831
Kathryn, Inc., Chi., Ill.
Ser. Aug. 29, 1947 D. U. July 31, 1947

Rani—VI—M—527,404
Hindu Incense Mfg. Co., Chi., Ill.
Ser. July 5, 1947 D. U. Apr. 15, 1927

Rapid-Shave—IV—I—528,911
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Ser. July 19, 1947 D. U. Feb. 10, 1909

The following Trade-Marks were published in the Official Gazette of the United States Patent Office in Volume 607 (number 4) dated February 24, 1948 and Volume 608 (numbers 1-4) dated March 2 to March 23, 1948, inclusive.

Amion—VI—K—531,153
J. B. Roerig and Co., Chi., Ill.
Ser. No. Aug. 12, 1947 D. U. May 13, 1947

Anatole—ABCFHI—536,984
Anatole Robbins, L. A., Calif.
Ser. Oct. 7, 1947 D. U. Oct. 1938

Any Time—VI—B—537,981
Hattie Carnegie, Inc., N. Y., N. Y.
Ser. Oct. 16, 1947 D. U. Jan. 1, 1946

Any Where—VI—B—537,982
Hattie Carnegie, Inc., N. Y., N. Y.
Ser. Oct. 16, 1947 D. U. Jan. 1, 1946

B I M—VI—T—516,419
Elmer T. Kelley (Kekell Co.)
Louisville, Ky.
Ser. Jan. 27, 1947 D. U. Feb. 23, 1943

Balanced Beauty—VI—C—516,021
Kathleen M. Quinlan, Inc., N. Y., N. Y.
Ser. Jan. 20, 1947 D. U. Jan. 7, 1947

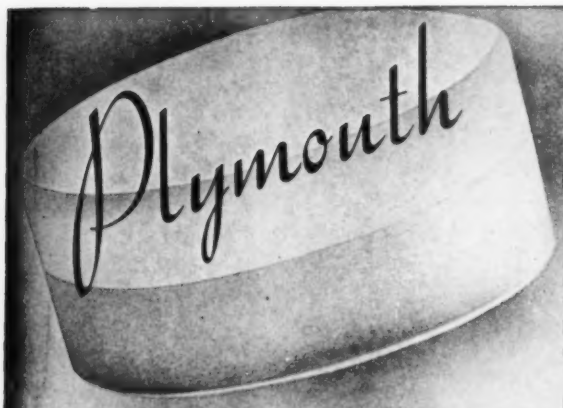
Ballerina Satin Slipper—VI—ABCHS—514,255
Coty, Inc., N. Y., N. Y.
Ser. Dec. 14, 1946 D. U. Dec. 10, 1946

Best & Co.—IV—A—516,001
Best & Co., N. Y., N. Y.
Ser. Jan. 30, 1947 D. U. Apr. 2, 1925

Big Ben—IV—A—528,670
Armour & Co., Chi., Ill.
Ser. July 16, 1947 D. U. April, 1928

Brute In Man—VI—BC—534,310
David A. Molinari, San. Fran., Calif.

(*Continued on page 690*)



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Patent Thoughts and Trends

By THOMAS CIFELLI, Jr., Patent Attorney

"Arrid" Evens The Score

About five years ago the so-called "Arrid" patent took quite a beating in the federal courts. More specifically the Second Circuit Court of Appeals (New York) declared invalid the litigated claims of the Wallace and Hand patent, U. S. 2,236,387, for Perspiration Inhibiting Composition. Instead of rushing headlong indiscriminately into more litigation, the patentee bided his time before bringing suit again and recently had his patent sustained in the Seventh Circuit Court of Appeals (Chicago). The case is presently before the U. S. Supreme Court and therefore it would be seemingly improper to express an opinion here as to which circuit court is correct. Not until Washington comes through with the unappealable answer will we know who is legally right.

However, it may be of interest to note what two of the highest federal courts in the nation had to say about the same patent.

It will be recalled that the patent dealt with the use of urea in anti-perspirant compositions containing aluminum chloride or sulfate. Prior compositions were said to be unsatisfactory because they frequently produced skin irritations and rotted fabrics. The introduction of urea overcame these disadvantages.

Koch (U. S. 2,011,292) taught that a stable solution of aluminum acetate or aluminum formate could be made by adding things like alcohols, urea, etc. The solution could be evaporated to dryness without decomposition of the salts.

Shipp (U. S. 2,174,534) was dealing with the problem of getting a sheen on textiles without destroying the textiles. Sulfuric acid was used for this purpose but, as might be expected, the problem was to get the fabric out of the acid bath before it was damaged or destroyed. Shipp found that if urea were added to the bath the fabric could remain in contact with the bath for as long as 60 seconds.

There were other prior art patents but for our purposes they may be omitted. Incidentally, a brief summary and analysis of patents in this field appeared in this column in the February, 1947 issue of this journal, at pages 247 and 249.

It is interesting to compare the reactions of the judges who wrote the opinions for the Second and Seventh Circuit Courts. The opinion of the former states:

We have repeatedly held that skillful experiments in a laboratory in cases where the principles of investigations are well known and the achievement of the desired end requires mere routine work rather than imagination do not involve invention . . . This is not to say that such steps might perhaps not lead to invention if the result was sufficiently unexpectable. But in the present case ingredients having well-known attributes were employed until the proper proportions were reached and a well-known anti-perspirant was combined with a neutralizing agent that would prevent injury to the clothing and skin without destroying the effects of the anti-perspirant as an astringent. No particular talent was involved in developing the plaintiff's product but only a process of routine experimentation by industrious chemists. The result achieved was apparently reached by other chemists contemporaneously through investigation indicated by familiar chemical principles.

The Seventh Circuit Court of Appeals had this to say:

Analogy in a complex field like chemistry is much more elusive than in the relatively simpler field of mechanics, . . . for chemistry is essentially an experimental science and its foresight no more certain today, in spite of the accumulation of knowledge, than it was informer times . . . Chemical action and reaction can rarely be foretold except in cases of well-established, definite and usually small groups of compounds. Even in these, the question often arises as to whether one member of a class will act in the same manner as another in a particular combination. Hence dependable conclusions as to new and unknown reactions can seldom be drawn, even if two elements belong to the same group.

Further, the Seventh Circuit Court said:

Shipp merely slowed up the disintegrating effect of the concentrate; he did not inhibit or bar it. Nor did he face the problem of retaining the beneficient acidic quality of a desirable anti-perspirant while inhibiting corrosion. We think he was very far from any art analogous to that with which the present patentees were concerned. They were dealing with a cosmetic, a cream, the desired effect of which was to remove or to prevent perspiration. They found that the old combination tended to injure the skin by corrosive action and incidentally damaged the fabric of the clothing of the user . . . The patentees' prescription of urea did not destroy the pH of the solution. They made no attempt to eliminate acidity by adding alkalies,—a discarded ineffective expedient, but they added urea, which is neutral in chemical reaction and which did not eliminate acidity but so acted as to prevent corrosiveness. This was their discovery.

So, until the final word is given by the Supreme Court, the "Arrid" patent is good in Chicago and surrounding territory but not so good in or around New York, roughly speaking.

Penicillin By Mouth

It has not been so long since penicillin was only administered parenterally, for example, intramuscularly, intraperitoneally and intravenously. Even those whose memories may be short will recall the great improvement in penicillin therapy resulting from the introduction of this drug in a form suitable for oral administration. Recently, a patent (U. S. 2,438,106) was obtained by Wyeth Incorporated, covering a penicillin composition suitable for administration by mouth.

In the early days penicillin had to be administered parenterally because when taken by mouth it was destroyed in the alimentary tract. Thus, it had been observed that in the average case of

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patients who took 20,000 Oxford units by mouth, only 1 to 3 per cent of the dose could later be accounted for in the urine, as against 80 to 90 per cent, when administration was parenterally.

Alburn, Charney and Bernhart (the inventors in whose names Wyeth obtained U. S. 2,438,106) found that if certain buffering agents are administered simultaneously with the penicillin, for example in a mixture of the two, a perorally efficacious composition results. The buffering agents should be of a type that fails to evolve carbon dioxide upon treatment with acid and, preferably, should yield a composition having a pH of 3.0 to 7.5 with the stomach acid.

Trisodium citrate is said to be especially satisfactory as a buffering agent, especially when used in a ratio of 1 gram for each 10,000 Oxford units of penicillin. Other such agents named in the patent are tripotassium citrate, disodium phosphate, disodium tartrate, disodium malonate, disodium maleate, sodium acetate, sodium lactate, disodium succinate, disodium fumarate, disodium saccharate, sodium gluconate, alumina, aluminum hydroxide, dipotassium phosphate, dipotassium tartrate, potassium lactate, dipotassium succinate, dipotassium fumarate, dipotassium saccharate, potassium gluconate, dipotassium maleate, magnesium citrate, magnesium tartrate, magnesium maleate, magnesium malonate, magnesium acetate, magnesium lactate, magnesium succinate, magnesium fumarate, magnesium gluconate, and calcium gluconate.

According to the patentees, it is not necessary to have the penicillin in pure form. In fact, the patent states that the buffering agents having adsorbent action (alumina) can be mixed directly with the culture media liquid containing the crude penicillin.

In order to show the action of the buffering agents in preventing the destruction of penicillin administered per os (indicated by increased amounts of penicillin detectable in the urine, the following tables, taken from the patent, are given:

Excretion of penicillin after administration of approximately 20,000 units.

Experimental Conditions	Per cent of Excreted Penicillin in Urine Up to 8 Hours after Administration
Intramuscular	81
...do	93
By mouth	3
...do	1
...do	2
By mouth with 1 gm. alumina	16
By mouth with 30 ml. of an aluminum hydroxide gel	16
By mouth with 25 ml. 0.3 N phosphate buffer pH 6.8	20
By mouth with 10 gms. disodium phosphate decahydrate adjusted to pH 7.5 with phosphoric acid	12

Urine Vol.	Hours After Administration	Conditions	Percent Penicillin excreted in Urine
35	0-2	5 gm. trisodium citrate plus 20,000 units penicillin sodium salt.	6.4
30	2-4		2.5
57	4-6		3.3
		Total	12
113	0-2	5 gm. trisodium citrate plus 20,000 units penicillin sodium salt.	8.7
87	2-4		3.5
75	4-6		0.8
		Total	13.0
143	0-2	5 gm. trisodium citrate plus 20,000 units penicillin sodium salt.	16.7
95	2-4		4.4
88	4-6		1.4
89	6-8		.....
		Total	22.5
158	0-2	25 gm. glucose plus 5 gm. trisodium citrate plus 20,000 units calcium penicillin.	13.5
108	0-2		5.2
110	4-6		1.5
		Total	20
115	0-2	25 gm. glucose plus 5 gm. trisodium citrate plus 20,000 units calcium penicillin.	10.4
77	2-4		4.2
60	4-6		1.4
		Total	16

To give an idea of the utility of the buffered penicillin, the patent states that 160,000 Oxford units buffered with trisodium citrate and administered per os each day for two days cured gonorrhea of the type resistant to sulfa drugs as completely as if the penicillin had been administered hypodermically.

A pretty good bibliography of the subject, at least as of the filing date of the patent application (June, 1944), appears in the patent. The Patent Office Examiner cited the following references:

United States Patents

Number	Name	Date
1,486,002	Ableben	Mar. 4, 1924
1,527,455	Wershow	Feb. 24, 1925
1,646,553	Murlin	Oct. 25, 1927
2,101,867	Miller et al	Dec. 14, 1937
2,293,359	Quisling	Aug. 18, 1942

Foreign Patents

Number	Country	Date
10,667	Australia	1932

Other References

Lucas, Canadian Chemistry and Process Industries, Sept. 1943, pages 534, 536.

Physician's Bulletin, vol. IX, No. 1, Jan. 1944.

Powell et al., Journ. Indiana St. Med. Assn., July 1942, vol. 35, pages 361-2.

Manuf. Chemist and Mfg. Perfumer, Dec. 1943, vol. 14, pages 380-382.

Chain et al, Endeavour, Jan. 1944, vol. 3, page 11.

Am. J. Pharm., Aug. 1943, pages 302-3.

Meyer et al, Science, July 1942, vol. 96, pages 20 and 21.

Roberts et al., J. Biol. Chem., Jan. 1943, vol. 147, pages 47, 51, 52.

Manufacturing Chemist, December 1943, page 374.

McDermott et al., Science, March 2, 1945, pages 288, 229.

Seeberg et al., Science, August 31, 1945, pages 225-227.

Florey et al., The Lancet (London), March 27, 1943, page 387.

J. Bacteriology, Oct. 1943, pages 386-389.

The Lancet, May 15, 1943, page 605.

In spite of the large number of references, the Patent Office allowed rather broad claims, in particular claim 3.

Nitrated Estrogenic Hormones

Prof. J. B. Niederl continues to add to his collection of patents. Of more than passing interest is his U. S. 2,438,819, which deals with nitrated estrogens. While these nitrated compounds are said to be estrogenic no comparative data are given in the patent so one cannot tell therefrom how the nitrated estrogens compare with the unnitrated compounds.

Other Patents

U. S. 2,434,060—**Merck—Tetraacetylribonamide. Ribonamide is reacted with acetic anhydride in the presence of zinc chloride.**

U. S. 2,434,061—**Merck—Racemization of Alpha-Hydroxy-beta, beta-Dimethyl-gamma-Butyrolactone.**

U. S. 2,434,099—**du Pont—Halogenophenylthio-2, 3-Epoxypropanes. Bactericides, etc.**

U. S. 2,434,100—**du Pont—Halogenophenylthiosuccinic Acids. Bactericides, etc.**

U. S. 2,434,246—**Nopco Chemical Co.—Preparation of Alpha, Alpha-Dimethyl - Beta - Hydroxypropionaldehyde and Alpha-Hydroxy-Beta-Dimethyl - Gamma - Butyrolactone. Pantothenic Acid Intermediates.**

U. S. 2,434,414—**Eli Lilly—Preparation of 2-Hydroxymethyl-1, 4-Dioxane by reacting 3-(Beta-Hydroxyethoxy) - 1, 2-epoxypropane with concentrated sulfuric acid, as dehydrating agent.**

U. S. 2,434,687—**Distillation Production of Vitamin A Active Esters. Kitol is esterified. See also *U. S. 2,414,458***

U. S. 2,434,788—**Nopco—Fat-soluble Vitamin concentrates.**

U. S. 2,434,789—**Nopco—Separation of Vitamin Alcohols from Vitamin Esters.**

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Cellulose Derivatives

(Continued from page 614)

Water, to make	**100.0 " "**
Perfume and preservative	**sufficient**

The purpose of this preparation is to protect the skin against cutting oils, industrial dirt and grime, lacquers, solvents, stains and dyes and to permit their easy removal with soap and water. Creams of this kind have served effectively and satisfactorily in industrial practice.

In two recent British reports,[19,20] it is suggested that methyl cellulose is of value in formulating oil proof barrier preparations. The following cream, which is now undergoing practical tests, forms an excellent "skin" on application:

Liquid petrolatum	**10**
Glycerine	**10**
Methyl cellulose (Tylose M50)	**6**
Water	**74**

It is said that the use of the liquid petrolatum in the jelly base increases the resistance of the film to sweat.

Obviously, the properties which make methyl cellulose useful in cosmetics and protective products are also applicable in dermatological preparations. For instance, Downing and his associates[21] have found that the suspending properties of methyl cellulose may be used very advantageously in the preparation of a widely used dermatologic lotion conforming precipitated sulfur and camphor. This is illustrated in the following formula:

Precipitated sulfur	**10.0 Gm.**
Spirit of camphor	**10.0 cc.**
Alcohol	**80.0 cc.**
Methyl cellulose, 2% solution	**30.0 cc.**
Rose water, to make	**240.0 cc.**

The resulting product has a smooth; creamy appearance that is in marked contrast to the curdy mixture ordinarily used. The activity of the sulfur is increased and it remains closely adherent to the skin instead of flaking off as in other methods of suspension.

Davies[20] has recently remarked that a low proportion of a high viscosity grade of methyl cellulcse is best employed for the preparation of a fluid emulsion. Thus, a pourable base may be made from:

Methyl cellulose (Tylose M450)	**1.5**
Peanut oil	**10.0**
Glycerine	**5.0**
Water	**83.5**

This yields a thick, smooth, pourable white cream which, four months after its preparation, has not yet separated. It is free from tackiness and is easily removed with water. This base has been used as a vehicle for benzyl benzoate acriflavine and other drugs.

Non-greasy, water-soluble ointment bases may also be prepared with this material. Osborn and Dekay[10]

found that the most suitable concentrations of methyl cellulose of the low viscosity (15 cps.) type lay between 15 and 20 per cent. Extra high viscosity (1500 cps.) methyl cellulose could be used in a proportion ranging from 10 to 15 per cent to produce bases of ointment consistency. These bases are compatible with most of the ingredients which are used in the official ointments.

Indicative of the way in which the cellulose ether may be used is its employment in the following acriflavine ointment,[11] valuable for its antiseptic properties:

Acriflavine	**0.1 Gm.**
Yellow soft petrolatum	**60.0 Gm.**
Methyl cellulose (Tylose SL400)	**2.0 Gm.**
Water, to make	**100.0 Gm.**

Another example of the use of methyl cellulose is given[22] in the following formula for a histimine jelly which may be used for iontophoresis or for local application:

Methyl cellulose	**10.0 Gm.**
Glycerine	**40.0 Gm.**
Chlorocresol	**0.1 Gm.**
Histamine acid phosphate	**4.0 Gm.**
Distilled water, to make	**200.0 Gm.**

Also noteworthy is the use of a small proportion of the cellulose derivative in the following "washable" emulsion base for sulfa drugs. As cited by Howard,[23] this consists of:

Mineral oil	**64.00**
Water	**23.45**
Beeswax	**5.00**
Sulfonamide	**5.00**
Triethanolamine	**2.00**
Methyl cellulose (Methocel)	**0.30**
Sodium bisulfite	**0.20**
"Aerosol OT"	**0.05**

The superior film-forming ability of methyl cellulose has found important applications in dermatology and in the treatment of burns and other wounds. The idea of using this property to form transparent, protective medicated eschars or membranes over burns has occurred to a number of workers.[24,25] Sulfadiazine containing films of this sort were described and used by Pickrell[26] at Johns Hopkins Hospital. In addition to eschars formed by spraying or painting suitable methyl cellulose solutions on burns, he also employed preformed films containing 10 to 15 per cent of sulfadiazine. These last were found to be especially useful in the outpatient department, since they had the advantage in that the dressing need not be changed for a week or more.

Such a pre-formed film was made by Pickrell in the following manner: Suspend 50 Gm. methyl cellulose (Methocel, 15 cps.) in 500 cc. boiling water; freeze over night. To water add 25 Gm. sulfadiazine, 20 Gm. glycerine, 20 Gm. propylene glycol, 10 Gm. "Carbowax"

(*Continued on page 692*)

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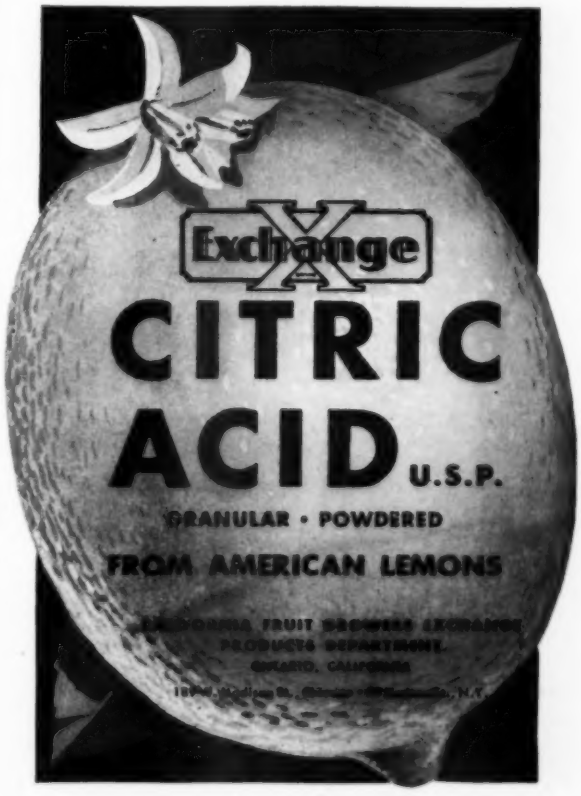

Compounder's Corner

Dermatologic Formulas

The function and formulation of powders, lotions and solutions are discussed and illustrated by H. Goodman in the first half of his concise but comprehensive discussion of dermatologic formulas. Seventeen typical formulas are given by this well known dermatologist in the April, 1948 issue of *The March Manual*, as follows:

No. 1

Dusting powder—after bath

Bentonite	2.
Boric acid	4.
Talc	10.
Zinc stearate	10.
Kaolin	4.
Purified infusorial earth	4.
Zinc carbonate, sufficient to make	100.

Mix and sift through No. 200 sieve.

No. 2

Foot slip powder with alum

Alum	4.
Talc, sufficient to make	100.

No. 3

Face powder (light coverage-type formula)

Zinc oxide	10.
Calcium carbonate	6.
Kaolin	16.
Zinc stearate	10.
Talc, sufficient to make	100.

Mix and sift through No. 200 sieve.

No. 4

Face powder (medium coverage-type formula)

Zinc oxide	16.
Calcium carbonate	4.
Kaolin	20.
Zinc stearate	6.
Talc, sufficient to make	100.

Mix and sift through No. 200 sieve.

No. 5

Face powder (heavy coverage-type formula)

Titanium dioxide	16.
Magnesium carbonate	10.
Magnesium stearate	6.
Kaolin	32.
Talc, sufficient to make	100.

Mix and sift through No. 200 sieve.

No. 6

Face powder (fatty-type formula)

Lanolin	2.
Zinc oxide	4.
Calcium carbonate	50.
Magnesium carbonate	12.
Talc, sufficient to make	100.

Rub the fat with mixture of powders, sift through No. 200 sieve.

No. 7

Nail powder polish

Tin oxide	50.
Kaolin	32.
Talc, sufficient to make	100.

No. 8

Liquid colored powder

Zinc oxide	2.
Neocalamine, prepared	6.
Magnesium carbonate	4.
Glycerine	6.
Water, sufficient to make	100.

Suspend mixed powders in liquids.

No. 9

Scalp wash with alcohol

Ammonium carbonate	4.
Glycerine	6.
Alcohol, isopropyl	30.
Water, sufficient to make	100.

Dissolve powder in mixture of liquids.

No. 10

Two-bottle "white lotion"

1	Zinc sulfate	8.
	Water	50.
2	Sulfurated potash	8.
	Water	50.

Dissolve each separately; filter each, and dispense in separate bottles. *Directions:* Apply liquid from bottle 2 to affected skin in thin layer and follow with some from bottle 1.

No. 11

Tincture of iodine and aconite (diluted) for ringworm of toes

Tincture of iodine	10.
Tincture of aconite	10.
Alcohol, sufficient to make	100.

No. 12

Hand mucilage

Bentonite	20.

Incorporate into:

Starch	20.
Water, sufficient to make	100.

Rub starch in cold water, heat while stirring until paste forms. Add the bentonite powder to warm paste, mixing by mechanical agitation.

No. 13

Hand cream with talc

Stearic acid	6.
Beeswax	2.
Cetyl alcohol	2.
Petrolatum	2.
Hydrogenated cottonseed oil	2.
Lanolin, anhydrous	2.
Glycerine	6.
Talc	24.
Triethanolamine	1.
Water, sufficient to make	100.

Melt the fatlike solids, warm the glycerine, heat the water with triethanolamine and mix by mechanical agitation, adding talc as it cools, and continuing agitation until smooth.

No. 14

Hand-protective chemical cream

Sorbitol	3.
Stearic acid	20.
Liquid mineral oil, low viscosity	10.
Triethanolamine	1.
Water, sufficient to make	100.

Melt the stearic acid; warm the oil; heat the water and triethanolamine and mix by mechanical agitation.

No. 15

Eyewash

Alum	0.6
Boric acid	2.
Distilled water, sufficient to make	100.

Dissolve the alum and boric acid in distilled water. Filter. Must maintain aseptic precautions. Special apparatus for eye lotions essential.

No. 16

Two-bottle "para" dye

	Color sought		
First bottle	*Black*	*Brown*	*Blond*
Paraphenylendiamine	2.	0.5	0.1

Diamidophenol	—	0.5	0.12
Water, sufficient to make	100.	100.	100.

Dissolve.

Second bottle

Solution of hydrogen peroxide, 17 volumes

Paraphenylenediamine and diamidophenol are dangerous and poisonous materials. Great caution must be exercised.

No. 17

Skin-bleach-acting lotion

Solution of hydrogen, 17 volumes	66.
Distilled water, sufficient to make	100.

Lime Hair Creams

In response to an inquiry concerning the production of old-style lime hair creams, S. P. Jannaway (S. P. C. 21:68, 1948) *points out that, as a group, these hair creams are not so satisfactory as the more modern brilliantine creams. For making these hair creams only fresh, full-strength, i.e., saturated, lime water should be used: alternatively, some prefer to use the more concentrated saccharated lime water. The formula will normally consist of almond, peanut, sesame, peach kernel, olive or other suitable vegetable oils, together with a sufficiency of lime water and/or saccharated lime water, with a trace of preservative, a suitable citrus type perfume oil, and possibly a little wax, in order to increase the "body" and glossing properties. The resulting emulsion tends to be of the water-in-oil type and cannot therefore be further diluted with water. Basic formulas are as follows:*

Oleic acid	20
Olive or other vegetable oil	40
Lime water	35
Saccharated lime water	5
(Cetyl alcohol or beeswax	1
(Wool wax	0.5
Preservative (e.g., 0.3 per cent *p.*-chlorophenyl α-glycerol ether)	q.s.
Perfume (citrus type)	0.5-1

The materials bracketed are optional stabilizers and improvers of such an emulsion. Generally speaking, the inclusion of traces of w/o emulsifying agents tend to improve these calcium soap emulsions. Alternative preservatives are the parahydroxy-benzoic acid derivatives.

II.

Oleic acid	12
Mineral oil, light	45
White beeswax	2
Wool wax	2
Lime water	20
Saccharated lime water	20
Perfume and preservative	q.s.

These formulas can be modified as desired—a more viscous cream being given by increasing the proportion of waxes and the ratio of water to oil. If oil or fatty acid separates out, the formula can be adjusted by adding a little more saccharated solution of lime. In some formulas, up to 5 per cent glycerine may be incorporated.

Compressed Tablet Disintegration

Compressed tablets are one of the most popular forms of medication today. The fact that the efficiency of a tablet is to a great extent influenced by the speed with which it disintegrates was recognized as early as 1902, and in recent years both the British and the Swiss Pharmacopoeias have included official methods for determining the time of disintegration for compressed tablets. However, in the United States, there is a variety of procedures currently in use for determining this factor, and there is a considerable discrepancy in the speeds with which different makes of the same type tablet disintegrate. This last is well indicated in the studies made by G. J. Sperandio, R. V. Evanson and H. G. DeKay (*J. Am. Pharm. Asso.*, Scient. Ed. 37:71, 1948). In their investigations disintegration tests were run on a total of over 4000 tablets from seven different manufacturers, using seven different methods for determining the disintegration time. It was found that no two methods consistently give the same average disintegration time for the same batch of tablets, and that some methods are not satisfactory for all types of tablets.

Taking the several factors into consideration, these workers devised a new apparatus and method for determining the disintegration time of tablets as follows: A circular cylinder 1½ inches in diameter and 2½ inches long was made from 8-mesh wire gauze. Each end of the cylinder was closed with 8-mesh wire disks, to the centers of which were soldered small axles, with a pulley wheel of the same diameter as the cylinder attached to one of the axles. A small trap door which could be opened and closed was made in the side of the cylinder, which was then suspended by the axles between two aluminum supports which has been build around a 1000-cc. beaker, so that the cylinder revolved freely on the axles. The pulley wheel was connected by a belt to another pulley attached to a small motor on a ring stand directly above the beaker. The beaker was then filled with distilled water at room temperature to a depth just sufficient to cover the top of the wire basket. To maintain a clear solution, an outlet tube was blown into the bottom of the beaker and an inlet tube was introduced into the top. Distilled water was then run in at the top and drained out at the bottom at a rate of 100 cc. per minute during the disintegration tests. The tablet or tablets were dropped into the trap door, which was then closed and the motor adjusted so that the basket rotated the water at the rate of ten complete revolutions per minute. The time of disintegration was taken as the time required for the tablets to break apart into particles which would fall through the basket to the bottom of the beaker.

The results obtained with this method—called the DeKay-Evanson-Sperandio Method—were found to compare favorably with the averages of the other methods combined. The method is recommended as an improved means of determining an accurate disintegration time for all types of tablets for the following reasons: It gives a true disintegration time. The disintegration of the tablet is neither impeded nor accelerated by any physical force or unnatural shaking. The end point is always definite and is the same for all tablets. The solution is kept clear, allowing the end point to be seen. The disintegration times obtained are consistent for the same types of tablets. From one to five tablets can be tested at one time.

Sunburn-Preventive Cream

As part of a detailed discussion on methods of analysis of such products, S. H. Newburger (*J. Asso. Offic. Agr. Chemists* 30:683, 1947) presents the following typical composition for a sunburn-preventive cream:

Glycerol monostearate (self-emulsifying)	14.04	per cent
Anhydrous lanolin	5.08	" "
Propylene glycol	5.08	" "
Titanium dioxide	2.70	" "
Iron oxides	2.16	" "
Methyl parahydroxy-benzoate	0.16	" "
Isobutyl para-amino benzoate	2.15	" "
Isopropyl myristate-palmitate	25.22	" "
Water	43.41	" "

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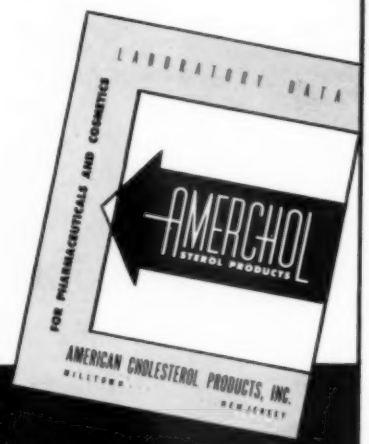

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Advancing Therapy

Urethane as an Antiseptic

In the *British Medical Journal* (1: 304, 1948) it is stated that the treatment of wounds infected with Gram-negative organisms still presents a difficult problem. Streptomycin, though often strikingly successful, is not yet generally available. Urea and its derivatives are among the few substances with a greater action on Gram-negative bacilli, such as *Ps. pyocyanea* and *Proteus* and coliforms generally, than on the Gram-positive pyogenic cocci. In 1946, Weinstein showed that both urea and urethane, the latter being the more active, are bacteriostatic and to a limited extent bactericidal to Gram-negative bacilli. Their effect is enhanced by sulfonamides and they neutralize the sulfonamide-inhibiting effect of *p*-aminobenzoic acid. More recently Weinstein has studied propyl and butyl carbamate on similar lines. They exert the same effects to an even greater degree, being about three and six times, respectively, as active as urethane, which is more than twice as active as urea.

Urethane has now been given a clinical trial as a wound antiseptic by Howe and Weinstein (*Surg., Gynec. & Obstet.* 84:913, 1947). A solution containing 10% of urethane and 1% of sulfanilamide was used in 33 cases; 10% urethane alone appeared to give equally good results in six cases. The usual method was to saturate dressings with the solution; more solution was applied every four hours, without removing the gauze in contact with the wound. Bacteriological studies showed that this treatment was usually successful in eliminating Gram-negative organisms and particularly *Proteus* or *Ps. pyocyanea*. Gram-positive organisms were unaffected as a rule, but urea derivatives and penicillin can be combined in a single application if necessary, and clinical studies of its isefulness are projected. Uretha ne does not seem to delay wound healing and has no undesirable systemic effects, except that if applied to a large area it may be absorbed in sufficient quantity to cause nausea and vomiting.

Oral Toxicities of Surface-Active Agents

Among the numerous uses to which surface active agents have been put are a number of applications, such as in dentifrices and various pharmaceuticals, which may involve possible ingestion of these compounds. Many of these surface-active compounds have been studied with regard to oral toxicity. Additional data presented by O. G. Fitzhugh and A. A. Nelson (*J. A. Ph.A.* 37:29, 1948) include the chronic oral toxicities of three extensively used compounds and the subacute oral toxicity of three other surface active agents.

In a two-year chronic toxicity experiment alkyl dimethyl benzyl ammonium chloride was the most toxic of three surface-active agents. It was toxic to rats at a concentration of 0.063 per cent or more in the diet. At a concentration of 0.5 per cent all animals died within ten weeks: at a concentration of 0.063 per cent some animals showed histopathological lesions and the growth rate of the groups was slightly less than that of the controls. The degree of toxicity of other dosages was related to the concentration of the alkyl dimethyl benzyl ammonium chloride in the diet. A 1 per cent concentration of sodium dioctyl sulfosuccinate produced a significant retardation of growth rate but by gross or histopathological lesion. Sodium lauryl sulfate was not toxic at the dosage levels of 1 per cent or less in the diet.

In a four-month experiment 4 per cent sodium lauryl sulfate in the diet produced a significant decrease in growth of rats. Sodium alkyl aryl sulfonate, polyethylene glycol monoisooctyl phenol ether, and sulfoethyl methyl olylamide produced similar growth effects at the 2 per cent concentration. Death occurred in all animals on 4 per cent sodium alkyl aryl sulfonate, on 8 per cent sodium dioctyl sulfosuccinate, and on 8 per cent sodium lauryl sulfate. Three of 5 animals on 8 per cent sulfoethyl methyl olylamide lived for the duration of the experiment.

The toxic effects of the surface-active agents were produced by irritation of the gastrointestinal tract. To an extent which depended on the concentration of the surface-active agents in the diet, this irritation prevented proper nutrition. In severe cases of irritation death resulted.

Leukemia Treated with Radioative Phosphorus

The growing importance and value of radioactive phosphorus, P^{32}, in the treatment of the blood disease, leukemia, is indicated in the report of J. H. Lawrence and his associates (*J. A. M. A.* 136:672, 1938) covering the period 1936 to 1947. In this study of 129 patients with chronic myelogenous leukemia treated with P^{32} alone or combined with roentgen rays it was found that comfortable life is prolonged. The somewhat selective irradiation provided by P^{32} has not resulted in any marked improvement in the duration of life in this disease. It does provide a convenient method of giving generalized irradiation, and there is the added advantage of absence of radiation sickness. The fact that 33 patients in this series have lived or are living five or more years after the onset of their symptoms is a reminder that many patients with chronic leukemia have many years of relatively comfortable life, and it is not possible to predict which these will be when they are first seen. These studies indicate that P^{32} may be the best therapeutic agent in the treatment of chronic myelogenous leukemia.

Niacin vs Sulfa-Caused Anorexia

With the introduction of the sulfonamides, says L. S. Goldstein (*New York State J. Med.* 48: 82, 1948) the appearance of post-infection anorexia (loss of appetite) in children proved to be a most trouble-

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some problem. The cause of this apparent anorexia was unknown at the time and there were many factors to be considered. A search of the literature offered a likely answer in the use of nicotinic acid or its amide. Following this lead, Goldstein has added 50 mg. of niacinamide to his sulfonamide prescriptions during the past five years. Although 50 mg. of niacin was an arbitrary figure it should prove sufficient for the average illness. With the addition of niacinamide to the sulfa preparations, mothers no longer complained that their children would not eat.

Vitamin K for Essential Hypertension

According to their report in *Progesso Medico* (through *J. A. M. A.* 136:725, 1948) A. Morelli and P. Salvi have found that the formation of cholinesterases is increased in the blood serum of patients with essential hypertension and that the intravenous injection of a solution containing 10 mg. of synthetic vitamin K (menadione, 2-methyl-1,4 naphthoquinone) diminishes both hypertension and the formation of cholinesterases in the blood serum of patients. The authors believe that essential hypertension is due to an imbalance of the autonomic nervous system and that vitamin K stimulates the tonus of the autonomic nervous system and reestablishes its balance.

Antibacterial Properties of Cod Liver Oil Fatty Acids

Following studies of the effects of cod liver oil on tubercle bacilli cultures, J. Solomides (*Press. Med.* 55: 719, 1947, through *J.A.M.A.* 136: 355, 1948) found that under certain conditions of *pH* and with well determined concentrations, the alkali soaps of the fatty acids contained in cod liver oil were capable of inhibiting the growth of *Staphylococcus aureus* in mildly alcoholized broth in considerable dilutions (1:9,000,000). Pneumococci and streptococci proved to be even more sensitive to these substances, since inhibition of their growth could be obtained in even higher dilutions. The tubercle bacillus was killed by this product in glycerinated broth in dilutions of 1:50,000. Thus the antituberculous principle contained in cod liver oil may be identified reasonably with one or several of the free fatty acids of this oil or of those liberated in the culture by the lipase of the tubercle bacillus itself. Further experiments showed that the growth of tubercle bacilli may be controlled with an alcoholic emulsion of distillates of cod liver oil ranging from 1:6,000 to 1: 10,000. It is concluded that the fatty acids of cod liver oil are active in considerable dilution against pneumococci, staphyloccocci and tubercle bacilli and that the distillate of this oil is a strong bacteriostic agent against the tubercle bacillus.

Handkerchiefs and Spread of Colds

In a lecture on the common cold, C. H. Andrews (through *Pharm. J.* 160: 83, 1948 said that recent evidence suggested that more unpleasent germs were spread from the nose than from the mouth and throat. This led to the question whether bacteria and viruses accidently shaken out of handkerchiefs might not be of tremendous importance. Tests had shown that very many bacteria might thus be shaken out and remain for a time in the air: handkerchiefs from the later stages of a cold are particularly effective germ distributors. Work now in progress suggested the possibility that impregnation of handkerchiefs with a disinfectant—phenylmercuric bromide seemed the most promising—might make them much less dangerous in this respect. This might be important: infested handkerchiefs might be a danger, not merely because of what was shaken off them in the air but because handling contaminated handkerchiefs necessarily spread germs on the hands and thence on to everything a person touched.

New Scabies Treatment

Forty-four cases of scabies have been treated by H. M. Robinson, Jr. and H. M. Robinson (*Bull. School of Med., Univ. Maryland* 32:84, 1947) with a tyrothricin-benzyl benzoate mixture made as follows:

Tyrothricin	0.05 per cent
Benzyl benzoate	30.00 " "
Benzocaine	3.00 " "
Alcohol (23A)	65.00 " "
Distilled water, to make	100.00 " "

Each patient was furnished with a bottle containing six ounces of the mixture, and was instructed to use it in the following manner:

1. Open blisters and remove crusts with a needle. 2. Take a warm bath with copious amounts of soap and water. 3. Dab dry. 4. Rub the solution on lightly from neck to toes twice daily for the next two successive days. 5. After the second day take a bath as at first and then report to the doctor. 6. Scabies is a contagious disease and every member of the family that is infected should be treated. 7. All bedclothes, underwear, towels, etc., that come into contact with the infected skin should be sterilized by boiling.

A satisfactory result was obtained in all but one case. A noteworthy effect was the rapidity with which itching was controlled. Except for a temporary burning or tingling on application, no serious reactions were encountered. The Robinsons are of the opinion that this method of treatment can be recommended in the treatment of scabies complicated by secondary coccogenous infection in children or adults and obviates the necessity for using more than one method of treatment, or more than one preparation.

Toxicity Studies on Polyethylene Glycols

The polyethylene glycols and the "Carbowax" compounds are being used in cosmetics and to some extent as vehicles in pharmacy and medicine. They have been reported to be practically devoid of toxicity. However, the results obtained by F. P. Luduena, J. K. Fellows, G. L. Lacqueur and A. L. Driver (*J. Indust. Hyg. & Toxicol.* 29:390, 1947) indicate that these glycols are not devoid of toxicity when applied daily to the skin. In their studies, definite doses of the polyethylene glycols were applied to the clipped skin of mature rabbits. The diet of the animals appears to influence the degree of toxicity. For example, repeated epidermol applications of polyethylene glycols 200, 400, 1500 and 4000 in doses of 1 to 2 cc. per Kg. were found to be toxic in 23 rabbits kept on a diet of rolled barley. In a more limited group of 6 rabbits on a Purina Ration, polyethylene glycols 200 and 1500 applied in the same way and dosage showed a lower degree of toxicity, while compound 400 seemed to be non-toxic. In view of these suggestive, though limited findings, Luduena and his associates feel that further investigations are desirable.

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Industry's Books

Pharmaceutical Dispensing, by William J. Husa, Ph.G., Professor and Head of the Department of Pharmacy, University of Florida, Third Ed., 834 pp., Husa Brothers, Iowa City, $6.

In preparing this edition, the entire book has been throughly revised so as to include new prescriptions from current files and all important new developments in pharmaceutical dispensing. Features of the new edition include the latest information on adjusting the pH and osmotic pressure of collyria and parenteral solutions . . . data on the newer drugs, such as antibiotics, sulfonamides, amino acids, surface active germicides, etc. . . . incompatibilities of drugs and specialties scientifically arranged and explained . . . thorough discussion of compounding various types of prescriptions, such as powders, capsules, ointments, emulsions, suppositories . . . chapters on professional pharmacy, hospital pharmacy, dental pharmacy, detailing the doctor . . . valuable information on tablet manufacture, enteric coatings, prescription pricing, legal aspects of prescriptions. The chapter on prescription pricing has been improved considerably with more detailed information on flat rate and computation systems including tables and examples.

A Manual of Pharmacology and its Applications to Therapeutics and Toxicology, by Torald Sollmann, M. D., Professor Emeritus of Pharmacology and Materia Medica, School of Medicine, Western Reserve University, Seventh Ed., 1132 pp., W. B. Saunders Co., Phila., $11.50.

This Manual of Pharmacology again aims to furnish a rather comprehensive outline of current knowledge and conceptions of drug actions, especially from the point of view of their practical importance in therapeutics and toxicology. The last few years have brought extensive developments in this field. The most impressive discoveries perhaps are in the field of the highly potent anti-infective agents which check the multiplication of parasites within the body by interfering with essential features of their nutritional metabolism. The entirely new "antibiotc" agents are not the only ones that have profited by intensified research activity. There have also been important advances in other selective anti-infective agents, the sulfonamides, the antimalarial drugs, the antimonial drugs, the insecticides and rodenticides, the auxins and weed killers. Vitamins and hormones have become more important as information has increased. The antithyroid drugs, anticonvulsants, antihistamine agents, anticholine-acetylases, folic acids, standardized curare, reliable digitoxin, "nitrogen mustards," and BAL have opened new fields of knowledge and use. The revision of this book has aimed to strike a reasonable balance by subordinating what appears of questionable value, and eliminating what no longer has real importance or interest; stressing critical observations and subordinating speculations that lack factual foundation. The statements are supplemented by references to the authors where more information may be found if desired.

A Textbook of Inorganic Pharmaceutical Chemistry, by Charles H. Rogers, Sc.D., Dean of the College of Pharmacy and Professor of Pharmaceutical Chemistry, University of Minnesota and Collaborators: Taito O. Soine, Ph. D., Associate Prof. of Pharmaceutical Chemistry, University of Minn. and Charles O. Wilson, Ph.D., Professor of Pharmaceutical Chemistry, University of Minnesota, Fourth Ed., 704 pp., Illus., Lea & Febiger, Phil., $10.

The author and his collaborators have thoroughly revised this fourth edition so that it now reflects the most recent advances in the field and conforms to the U.S.P. XIII and N. F. VIII. Among the many changes and additions made for this edition are more detailed discussions of the therapeutic value and uses of the individual compounds and their pharmaceutical preparations. (Only those official salts of organic acids in which the inorganic portion of the molecule contributes the therapeutic activity have been included for discussion.) Industrial processes in current use are described. A table of international atomic weights and a two-page table of four place logarithms are printed on front and back end papers. In addition, a wealth of important and necessary tabular matter and numerous formulas appear throughout the book. Under each of the chapters a short historical introduction to the individual element discussed precedes a consideration of its occurrence, physical and chemical properties, tests for identity and for purity, with special reference to the official requirements. Commercial methods of preparations are then described and some are illustrated. The assays of the individual products and of their salts are presented, particularly those methods which are officially recognized. Pharmaceutical preparations are listed with standards and specific indications for use.

Nutrition in Health and Disease, by Lenna F. Cooper, B.S., M.A., M.H.E., Chief, Department of Nutrition, Montefiore Hospital, Edith M. Barber, B.S., M.S., Writer and Consultant, Food and Nutrition; Helen S. Mitchell, A.B., Ph.D., Dean, School of Home Economics, University of Massachusetts, Tenth Ed., 729 pp., Illus., J. B. Lippincott Co., Phila., $4.

Progress in the field of nutrition and dietetics has been rapid in recent years and a new and broader concept now places on diet therapy an unprecedented importance for people of all age groups. The 10th Ed. of this textbook reflects all the advances in nutrition research and covers many new applications, emphasizing basic principles, practical methods, and new concepts of nutrition in health and disease. In a simple and straight forward style the authors discuss with authority, Principles and Applications of Normal Nutrition in Part One, Diet and Disease in Part Two, Food Selection and Preparation in Part Three, and Tabular Material and Special Tests in Part Four.

Perfumer's Shelf

Essential Oil from Convolvulus Pluricaulis

In studies carried out by N. K. Basu and P. C. Dandiya (*J. Am. Pharm. Assoc.* Scient. Ed. 37:27, 1948) an alkaloid, Sankhpuspine, has been isolated from *Convolvulus pluricaulis*. Also a volatile oil has been obtained by steam distillation of the fresh plant. *Convolvulus pluricaulis* Chois, is a hairy perennial herb belonging to the natural order Convolvulaceae. It is distributed throughout the plains of India in the Punjab and eastward to Behar and Chhotanagpur. The herb flowers during the months of March, April, and May. Its common Indian names are Sankhpuspi (Sanskrit), Poprang, Gorakhpinaw, Bephuli, and Dodak. In the Ayrurvedic system of medicine, the drug is very extensively used as a brain tonic and in the treatment of some forms of insanity. It is also used in the treatment of sexual neurasthenia.

The oil was examined and its physical characteristics were determined. They are as follows:

Specific gravity at 28°C	**0.8610**
Refractive index at 28°C	**1.4676**
Acid value	**0.79**
Ester value	**11.5**
Acetyl value	**26.6**

The oil has a pale yellowish color with a green tinge. It has a characteristic smell.

Minor Constituents of Eucalyptus Oils

In a discussion of the minor constituents of eucalyptus oils, J. C. Ralph (*J. Proc. Roy. Soc. N. S. Wales* 80: 208, 1947) reports that residues from the commercial distillation of oil from *Eucalyptus dives* contained much of the ester and acid present in the crude material. A typical sample of the crude commercial oil had an ester value of 14.9 corresponding to 4.4 per cent of methyl cinnamate, and an acid value of 2.1, equivalent to 0.7 per cent geranic acid. The material remaining after the extraction of geranic acid from the highest-boiling fractions crystallized on standing and was shown to be mainly eudesmol, identical with a sample isolated from *E. macarthuri*. The still residue from the oil of E. *australiana* contained about 2 per cent of methyl cinnamate and 0.2 per cent of geranic acid, based on the crude oil. Some free cinnamic acid was isolated but no tasmanol was detected in this oil. Various samples of the sesquiterpene alcohol present in the oil were isolated but could not be crystallized and were not identified. A hydrocarbon having constants similar to those recorded in the literature for aromadendrene was also isolated. During the distillation of piperitone, separated from the oil of *E. dives* type by the bisulfite process, a crystalline material separated from the last fractions. This was identified as para-menthane-1, 2, 3-triol. Oils from *E. dives* variety C. and *E. Australiana* contain the same principal ingredients in approximately the same proportions, and are also alike in minor constituents. The only difference is the absence of free cinnamic acid in the former and the failure to isolate crystalline endesmol in the latter. Both plants are known to exist in morpholocigally indistinguishable varieties which yield essential oils of thoroughly different types.

Orange Oils from Palestine

Four samples of orange oil prepared in Palestine have been studied by H. T. Islip and F. Major (*Bull. Imperial Instit.* 45:15, 1947). The oils were filtered through paper before examination. The results of examination of the clear, filtered oils are shown in the following table:

	Sample 1 Machine-expressed.	*Sample* 2 Hand-expressed.	*Sample* 3 Machine-expressed.	*Sample* 4 Machine-expressed.
Specific Gravity at 15.5°/15.5° C.	0.8500	0.8565	0.8524	0.8490
Optical Rotation α_D 20° C.	+97.8°	+96.8°	+96.5°	+99.0°
Refractive Index n_D 20° C.	1.4742	1.4750	1.4749	1.4746
Aldehydes, as decylic, *per cent.* (*w/w*)	1.28	0.94	1.33	1.15
Non-volatile matter, *per cent.* (*w/w*)	3.16	3.84	5.43	2.28

The differences in the constants of the three machine-pressed oils in comparison with those of normal sweet orange oil are small and, in the opinion of the investigators, they are unlikely to have a material influence on their market value. In the case of the hand-pressed oil, it was noted that the specific gravity is high and the aldehyde content very low. Without attempting to draw definite conclusions from the analysis of such a small number of samples, the significant feature of the four oils examined is a tendency for the aldehyde content to be low. This may, or may not, be characteristic of Palestinian sweet orange oil. This point can only be established after a much greater number of samples have been examined.

Nirolidol in Essential Oils of Papilionaceae

A report on the presence of nirolidol in the essential oils of the Papilionaceae is presented by Y. R. Naves (*Helv. Chim. Acta* 30:275, 1947). He points out that *Myrocarpus fastigiatus* and *M. frondosus*, family papilionaceae (*Leguminosae*), are Brazilian trees, locally called "cabreuva." The word yields an essential oil with a rose and santal odor, containing about 80 per cent of *d*-nerolidol. This oil has the following physical characteristics:

Specific gravity	**0.8875**
Index of refractors	**1.48322**
Specific rotation	**8.34°**

An acetone extract of the wood of *Myroxylon pereirae* (the source of balsam of Peru) was subjected to steam distillation. It yielded an essential oil equivalent to 0.258 per cent of the wood extracted. This oil was rich in *d*-nerolidol and had a specific gravity of 0.9214 and an index of refraction of 1.4944. The wood of *Myrospermum erythroxylum* yields an essential oil which is largely nerolidol. Nerolidol from cabreuva oil, mentioned above, is a mixture of 2, 6, 10-trimethyl-1, 6, 11-dodecatrien-10-ol and the 2, 6, 11-triene isomer, with a little farnesol and a mixture of sesquiterpene alcohols.

including bisabolol ($C_{15}H_{26}O$), a bicyclic alcohol ($C_{15}H_{28}O$) of the cadalene group, and possibly tetrahydrobisabolol. Naves gives methods of separation and identification are given. Also included for *d*-nerolidol, *dl*-nerolidol, dihydronerolidol, *d*- and *dl*-hexahydronerolidol, farnesol and linalool.

Phellandrene Tetrabromide

In the *Journal of the Chemical Society* (1947 pp. 1039-1044), P. A. Berry and A. K. Macbeth present a report on betaphellandrene tetrabromide and related compounds. These workers prepared a crystalline tetrabromide derivative of *l*-β-phellandrene isolated from the terpene fraction of *E. cneorifolia* oil, and proved its identity with a similar compound prepared from *l*-β-phellandrene from Canada balsam oil. The rotation of the bromide is of opposite sign to the parent hydrocarbon. Berry, Macbeth and Swanson had previously isolated *d*-β-phellandrene from water fennel oil in 1937, and a comparison was made of the two enantiomorphic forms of the tetrabromide. Details are given for the preparation of this tetrabromide and four other terpene tetrabromides are described. Data on these several preparations are summarized in the following table:

Source of terpene.	Melting point.	(special rotation).
l-*B*-phellandrene from *E. cneorifolia*	118°–119°	+53.6° in chloroform (c=5.41) + 48.8° in ethyl acetate (c =4.004)
d-*B*-phellandrene from water fennel oil	118°–119°	−55.1° in ethyl acetate (c =4.046)
dl-*B*-phellandrene by mixing equal parts of the *d* and *l* forms	112°–113°	Inactive
d-limonene from orange oil	104°–105°	+79.2° in chloroform
Dipentene from cineol	126°–127°	Inactive
p-mentha-2:8(9)-diene from chenopodium oil	115°–116°	+2.2° in chloroform (c=16.13)

Clary Sage Oil

It is pointed out in the *Perfumery and Essential Oil Record* (38:420,1947) that clary sage oil is probably one of the most important constituents of a good eau de Cologne. It is obtained from the plant *Salvia scharex*, only the upper ends of the stem being used to obtain the oil in a yield of 0.05–0.09%. Its characteristic musk-like odor is believed to be due to its non-volatile residue. This when obtained as a concrete by petroleum ether or benzene extraction is found to be a semi-solid, sticky mass, light green in color with some flaky or nearly colorless crystals. The crystalline component has been isolated as the odorless compound sclareol. This is the disterpene glycol, $C_{20}H_{36}O_2$, with a melting point of 105-106°C., nonvolatile in steam and completely soluble with ease in cold benzene. Its dihydrogenated derivative has a melting point of 114-115°C., and on dehydrogenation the compound 1, 5, 6-trimethylnapthalene is isolated. The compound sclareol has been localized in the flowering heads and seeds of the plant.

Spanish Oil of Lavender

Writing in ION (through *Perf. & Essent. Oil Rec.* 38:413, 1947), M. d'Argila considers the possibilities of developing the cultivation and production of oil of lavender in Spain to a much greater extent than at present. Among other things it should be possible to obtain an oil of such quality that it could compete with the best French grades. Production at present amounts to about 100 tons per annum, and the chief centers of cultivation are in Guadalajara, Murcia, Granada and the northern districts of Jaen. Linalol content ranges from 25-40 per cent, but by careful selection and attention to the various cultural requirements of the plant, which are not exacting, and some of which are briefly noted, both the linalol content and its quality should be greatly improved. There would be a corresponding decrease in borneol and camphor content.

Yields of oil distilled per 100 kilos of plant, using special collectors attached to the stills, ranged from 0.9 to 1.2 kilo. With selected plants the linalol content in the second year was a high as 58 per cent, plus 1.9 per cent esters, making a total of nearly 60 per cent linalol. The writer discusses the various derivatives, illustrated by structural diagrams, that can be obtained from linalol, such as the acetate, geraniol (and nerol), citral, etc.

The Civet

In another of his discussions on animals in perfumery, E. Hardy (*Perf. & Essent. Oil Rec.* 38:276,1947) devotes his attention to the civet. The civet is an elusive animal, but more than half-a-dozen sorts exist in Africa, India and Java. One of the largest is the African species, of tropical haunts, a slinky, brownish-grey carnivore, which is usually kept in cages for the purpose of obtaining its secretion. Of almost similar size—that is, some four feet long—is the long-tailed Indian civet, banded on its body, and characterized by a short, almost black crest down its back and its tail ringed with six black rings.

The well-known oily civet perfume comes from certain greatly developed sebaceous glands in the abdomen. Only the African civet (*Viverra civetta*), commonest in North Africa, has been used to any great extent in the perfumery industry, and much of that has been centered in Abyssinia. The ketone known as zibethone or civetone is the main contributor to the strong fixative odor. It has a very high boiling point (hence its lasting powers), and has been synthesized. In the wild, of course, the odor is largely used as a sexual attraction. Such odors have been evolved by the adaptation of the sebaceous glands just under the skin near to the sexual organs, and their secretion usually increases in proportion to sexual activity. In Abyssinia the natives have long raised civets in captivity specially for the scent trade, and the animal is comparatively easy to keep in zoological collections. Weekly or monthly collections of civet scent are obtained by scraping out the pocket where the secretion collects below the gland, according to the age of the animal and the time of year.

There is no doubt that the production of civetone is by no means confined to the African or Abyssinian civet; in point of fact these two anal glandular pouches occur frequently in other members of the viverrine family. For instance the odorous secretion from the glands of the rasse (*Viverra malaccensis*), smallest of the civets, is known to the Javanese as "dedes" and to the Malays as "jibet," and it is quite a favorite perfume amongst the Javanese. They apply it to their dresses or, mixed with ointments, to their bodies until their apartments and their festivities reek with it. This small civiet inhabits India, Ceylon, Burma, Malaya, China (Southern), Java, etc. The secretion of the Indian civet (*Viverra zibetha*) is similar in odor and equally extolled by the natives although proving so repulsive to Europeans. It inhabits Eastern India, including Bengal, and also Burma, Siam and Malaya.

The Javan civet or so-called "wild cat" (*Viverra tangalunga*) produces a secretion similar to that of the Indian civet and the rasse. It is a small c vet inhabiting Java, Sumatra, Borneo and the Philippines. There is an allied European and African genera of small mammals very similar to civets and called genets.

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1937 New 'Roche' synthesis; production in kilos.
1939 Monthly production in hundreds of kilos.
1940 Monthly production by 'Roche' in tons.
B2 — RIBOFLAVIN
1933 Isolation from whey by Kuhn and co-workers.
1935 Synthesis by Karrer, 'Roche' collaborator.
1941 Industrial synthesis.
1942 Monthly production in hundreds of kilos.
B6 — PYRIDOXINE
1938 Isolation completed.
1939 Work started on synthesis.
1941 Pilot plant production.
1943-45 Production increased to relieve shortage.
1946 Large-scale production.
NIACIN
1867 Prepared by Huber from nicotine.
1894 Amide synthesized.
1941 Quantity production to relieve shortage.
L - ASCORBIC ACID
1934 Synthesis by Reichstein, 'Roche' collaborator.
1934 Pilot plant started.
1936 Large industrial production.
1942 'Roche' monthly production in tons.
E — α - tocopherol
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Abreast of the Markets

Competition in Fine Chemicals Influences Market Trend. Five Cent Drop in Alcohol; Menthol Lower.

Demand in the market for fine chemicals as a whole held close to the recently lower level of total sales. The flow of demand to producers was steady but the quantities taken were less than they had been during recent months.

Reductions in prices for alcohol, menthol and gum opium resulted in generally lowering the price index. Cocoa butter also moved slightly in buyers' favor.

The decline in alcohol prices had not been unexpected. Except for the recent earmarking of substantial quantities of Cuban blackstrap molasses and alcohol for automotive fuel production in Cuba, conditions prevailing in the United States market had suggested that prices would continue to move in buyers' favor if competition continued to expand.

An odd element in the reduction of opium prices was the failure of codeine and morphine prices to undergo a decline.

According to a report from Brazil, the United States, during the third quarter of 1947, took none of Brazil's exports of caffeine and theobromine. Brazil was apparently surprised by the drop of purchases to none at all and the cause of the drop was being looked into. It is possible the return of Holland as a shipper of theobromine and the pending large scale production of synthetic caffeine in a United States factory now building may have been related to the third quarter record of zero business in United States imports of Brazilian caffeine and theobromine. Brazilian third quarter exports in 1947 were 23 metric tons of theobromine, comparing with 32 metric tons in the corresponding period of 1946, of which the United States took 26 tons. Third quarter caffeine exports in 1947 amounted to 22 metric tons, compared with 56 tons in the corresponding quarter of 1946, at which time the United States took 31 tons.

Release of production figures on sixteen synthetic organic chemicals in the fine chemical field and provided by the United States Tariff Commission showed that total production of the same in January 1948, was 186,190,853 pounds. Also, the preliminary production total covering these chemicals in 1947 was said by the commission to be 2,016,789,642 pounds. The materials so reported upon were acetanilide, acetone, acetylsalicylic and ascorbic acids, amyl acetate, butyl alcohol, dibutyl phthalate, ethyl acetate and ether, ethyleneglycol, formaldehyde, natural and synthetic methanol, niacin and niacinamide combined, pyridoxin, and thiamine hydrochloride.

Alcohol Prices Drop

Prices on denatured and pure ethyl alcohol have been reduced by 5c per gallon. The lowering of quotations took place regardless of some curtailment of exports of blackstrap molasses from Cuba but in some measure may have been a reflection of the substantial sales of industrial alcohol made by Cuban producers to United States chemical interests.

The new schedule of quotations was as follows: Completely denatured, drums, carlots, 94½c per gallon; less than carlots, 98½c to 1.03½c; tanks, 87½c; SD1, drums, carlots, 95c; less than carlots, 99c to $1.04; tanks, 88c; SD2B, drums, carlots, 95c; less than carlots, 99c to $1.04; tanks, 88c; SD23H, drums, carlots, 93½c; less than carlots, 97½c to $1.02½; tanks, 86½c; SD29, drums, carlots, 96c; less than carlots, $1.00 to $1.05; tanks, 89c; special solvent, drums, carlots, 95½c; less than carlots, 99½c to $1.04½c; tanks, 88½c. Pure ethyl alcohol, 190 proof, tax paid, drums, carlots, $18.05; less than carlots, $18.09 to $18.14; tanks, $17.98; absolute alcohol, drums, carlots, $19.02; less than carlots, $19.06 to $19.11; tanks, $18.95.

• Prices quoted in this section were current on the first of this month.

Menthol Down

The lack of a sustaining demand had its effect on the spot menthol market with the result that quotations were lowered to a price range of from $8.35 to $8.45 per pound for the natural goods. This development failed to stimulate consumer interest as the holders of substantial spot stocks evidently anticipated. Some opinion prevailed to the effect that in the long run, prices are likely to move further in favor of buyers for consumption.

Peppermint Oil and Menthol Situation in China

Preliminary trade estimate place the volume of accessible crude peppermint oil from the 1947 harvests in China at 300,000 pounds, permitting the manufacture in 1948 of approximately 150,000 pounds of menthol. This total may be somewhat high, because in the fall of 1947 trade circles were of the opinion that not more than 300 cases (18,000 pounds) of menthol would be produced in 1948. Probably the delivery of 300,000 pounds of the crude oil to manufacturers is dependent upon curbing inflation of the success of the factories in bartering cotton cloth or other staple commodities for oil. Output of menthol in 1947 amounted to only 50,000 pounds.

Orderly collections of crude peppermint oil in China have been impossible since VJ-day, on account of transportation difficulties, the large producing areas in Communist-held territory, and the tendency of farmers to hoard their crude oil in preference to sale for a rapidly depreciating Chinese National currency. Thus stocks from the 1947 crop were not delivered in any appreciable quantity to the Shanghai factories.

In Shanghai, menthol crystals were held during 1947 as a hedge against inflation. Some sources estimated that at least 1,000 cases (60,000 pounds) of menthol crystals were being held in that center. About 250 cases of the total were reportedly held by the industry and legitimate traders, and the rest by hoarders. Since exports during the first 11 months of 1947 were far in

(*Continued on page 687*)

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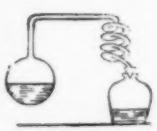

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New Crop Influences Lowers Mexican Vanilla Prices. Essential Oils of French Origin Show Weakness.

While prices on Bourbon vanilla beans will remain firm throughout the balance of this year, a development of interest in the market is the downward trend in the Mexican varieties as the result of new crop influences. Prices for new crop goods are considerably under those that had been quoted for old crop material. Small arrivals of new crop cut beans are already coming into the market and whole beans should begin to arrive within a relatively short time.

Little, if any, forward business has been placed in Bourbon vanilla beans since last October, at which time export prices were established at from 50c to $1 per pound higher by the French Colonial Government. These higher prices will, according to reports, be maintained in Madagascar, for the balance of this year.

Lower prices for Mexican beans should encourage buying, and in the opinion of leading importers it will only be a question of time when large extract manufacturers will enter the market for their usual requirements of Bourbon beans.

Spot prices for Mexican cut beans now range from $7.00 to $7.50 a pound. Whole Mexican beans are priced at from $7.35 to $8.60 a pound.

Considerable attention has been given during the past several weeks to the situation of the essential oils of French origin. At this time it is too early to predict what effect the devaluation of the franc is likely to have on the essential oils coming from France and the French colonies. There is considerable confusion regarding the economic influences on these oils and as yet there is no clear trend.

There has, in general, been a weakening of the prices of the French oils, but this to a large extent seems to have been due not merely to devaluation, but to a continuation of a trend that started in 1947. Lavender and lavendin are especially weak and at current trading levels are probably selling at their prewar levels. There has been some resistance to the purchase of jasmin and also competition from Italy.

As far as the colonial oils are concerned there has been a severe decline in the price of vetivert, amounting almost to the full extent of the devaluation. Bourbon geranium oil also softened during the current trading period also a firm position was maintained for clove oil. Java citronella oil firmed up during the past month although this product was meeting severe competition from Guatemala where the tendency was to underbid the Javanese.

Mint Oils Down

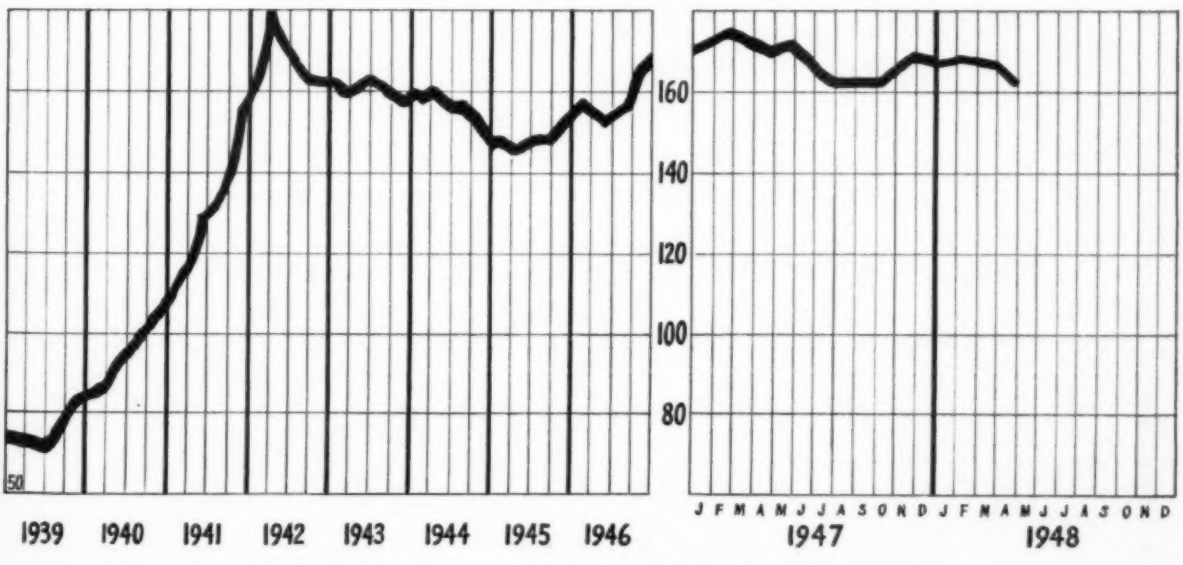
Natural peppermint oil dropped in price during the current trading period with the asking price now at $7.50 per pound. Distilled oil went to $8.10. Supplies were reported ample and advices from the country indicated that the coming crop might be bigger thit year than it was last year. Moss supply houses stated that spot stocks were ample until the new crop becomes available.

A new price of $7.50 per pound was reported as spot for spearmint oil. This represented a decline of $1 a pound from previous quotations. Some dealers were of the opinion that this price was considerably below what the market warrented. Demand for spearmint oil was good and stocks appeared ample. Reports indicated that farmers were holding out quantities of oil in the hope of obtaining higher prices.

Wormseed Lower

Wormseed oil was reduced in the spot market from $4.25 to $3.75 a pound. Supplies were reported to be ample to accommodate all normal orders. Most houses reported the oil in small demand. Foreign demand for it had in the past been greater than at present but the difficulties in obtaining export licenses and the absence of dollars abroad were making it difficult to sell on the foreign market.

50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for April declined from 166.4 to 161.5.

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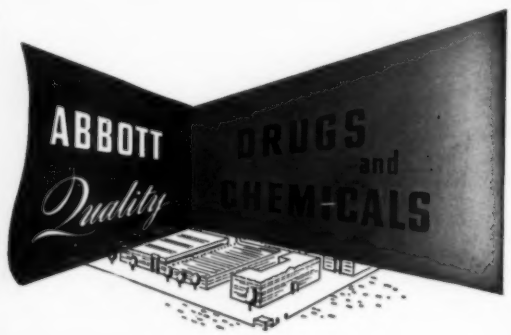

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APRIL PRICE CHANGES

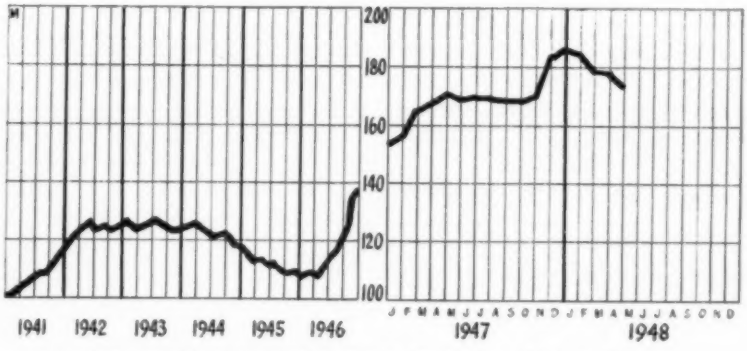
UP

Coumarin 25c
Phenobarbital 50c

DOWN

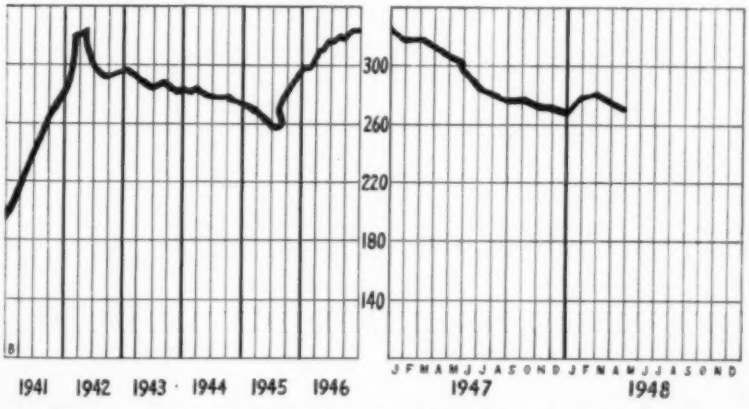
Aconite Root 15c
Alcohol SDA No. 1 5c
Ethyl USP 5c
Arnica Flowers 5c
Asafetida 5c
Benzoin Gum Sumatra 5c
Buchu Leaves 5c
Cajuput Oil 20c
Cananga Oil Native $1.25
Cantharides Chinese 30c
Caraway Oil 40c
Caranuba Wax No. 1 17c
Cascara Sagrada 6c
Cassia Oil Redist. 30c
Cedar Wood Oil 3c
Chamomile Flowers Hungarian 10c
Citral 40c
Citronella Oil, Ceylon 5c; Java 5c
Ethyl Butyrate 10c
Eucalyptol 5c
Geranium Oil, African $1.25
Bourbon 50c
Grape Fruit Oil 53c
Kamala 10c
Lemon Grass Oil 10c
Menthol Nat. 15c
Orange Oil, Italian 75c
Orris Root Flor. 3c
Papain Pure Powd. $1.25
Patchouli Oil 75c
Pennyroyal Oil 50c
Peppermint Oil, Nat. 5c; Redist. 15
Phenyl Ethyl Acetate 40c
Plantago Seed 1c
Rhubarb Root HD 5c.
Saffron, Spanish $7
Sassafras Oil, Artificial 10c
Senega Root 15c
Senna Tinnevelly 4c
Spearmint Oil $1
Valerian Root 2c
Vanilla Beans, Mex. cuts 50c
Whole 90c
Vetivert Oil, Java $2.50
Wormseed Oil 50c
Ylang Ylang Oil, Bourbon $4.50

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index declined from 179.4 to 174.5. Alcohol and menthol were lower.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined from 283.2 to 272.4. Buchu, Cascara, Rhubarb and Senna were lower.

Peppermint Oil and Menthol

(*Continued from page 683*)

excess of that year's production, at least part of the holdings are returning to regular trade channels.

Exports of dementholized peppermint oil from China are not listed officially, but trade sources place the 1947 total at about 75,000 pounds, chiefly to European ports. Menthol exports in the first 11 months of 1947 amounted to 64,676 kilograms, as shown in the following table:

China's Exports of Menthol Crystals, First 11 Months of 1947

Destination	Quantity (in kilograms)	Value (CN$1,000)
Australia	1,007	57,067
Belgium	2,312	505,576
British Malaya	123	28,628
Canada	680	122,000
Egypt	12	2,940
France	.....	30
Great Britian	5,988	1,020,405
Hong Kong	11,118	2,165,170
India	3,783	665,456
Netherlands	737	144,056
United States	38,916	8,267,141
Total	64,676	12,978,469

Source: Chinese Maritime Customs.

In 1940 Shanghai, the center of the peppermint oil and menthol industry, had more than 20 factories manufacturing menthol and its byproduct, dementholized peppermint oil. Peak production was about 1,500,000 pounds of menthol and 850,000 pounds of dementholized peppermint oil. By 1946, 6 factories had resumed part-time operations. Only 2 plants remained in operation in 1947. Their combined output of menthol amounted to 50,000 pounds during the entire year. It is expected that if the 1947 crop expectations are realized, other factories will open for short periods during 1948.

Exports of peppermint oil to the United States from China realized from US $3.85 to $7.50 per pound, while rates for menthol crystals per pound varied between US $7.40 and US $25.00.

The lack of export markets and the necessity of utilizing land for the production of foodstuffs practically eliminated cultivation of peppermint during the war. Postwar planting has not been resumed on the previous scale, since output of foodstuffs is more profitable. Furthermore, many of the areas suitable for the cultivation of peppermint are in Communist-occupied territory.

The two factories which remained in

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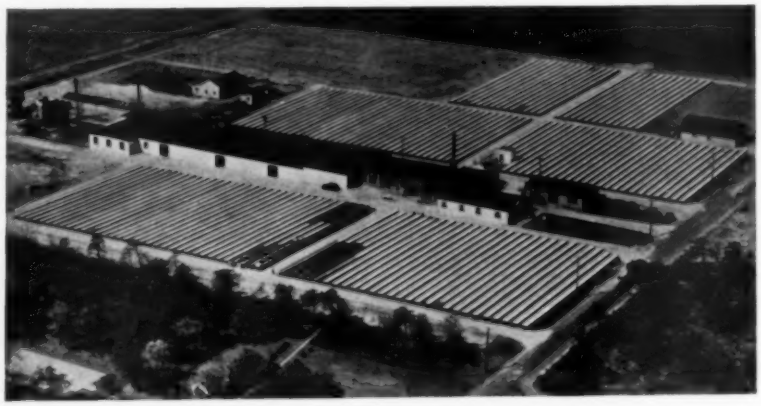

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GUM ARABIC BLEACHED
GUM GHATTI
GUM KARAYA (Indian)
GUM TRAGACANTH
GUM EGYPTIAN
GUM LOCUST (Carob Flour)
QUINCE SEED

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CASEIN

SPECIALTIES:

MENTHOL (Crystals)

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TARTARIC ACID

★

CREAM OF TARTAR

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EGG YOLK
BLOOD ALBUMEN

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JAPAN WAX
CANDELILLA WAX

GUMS

(CRUDE, POWDERED)

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production throughout 1947 made crop loans to farmers to increase output and thus assure themselves of at least limited stocks of crude oil in 1948. In view of the high interest rates (20 percent or more each month), and the weak financial position of the factories, the loans are expected to have little effect upon the production total. Increases in acreage devoted to peppermint in the next few seasons are expected to be nominal unless production is stimulated by Government loans to farmers. The need for food may preclude this assistance to a secondary crop.

On the basis of preliminary estimates, the 1948 production of menthol in China may surpass the 50,000 pound total recorded for 1947, but exports exceeding 200,000 pounds seem unlikely. Dementholized peppermint oil shipments are unpredictable in view of the increasing domestic consumption and the dependence of China upon European markets for foreign sales of this commodity. Export prices for menthol and peppermint oil will depend upon the maintenance of favorable exchange rates, with the added possibility that speculators may acquire and hold large stocks of menthol if a world shortage becomes apparent.

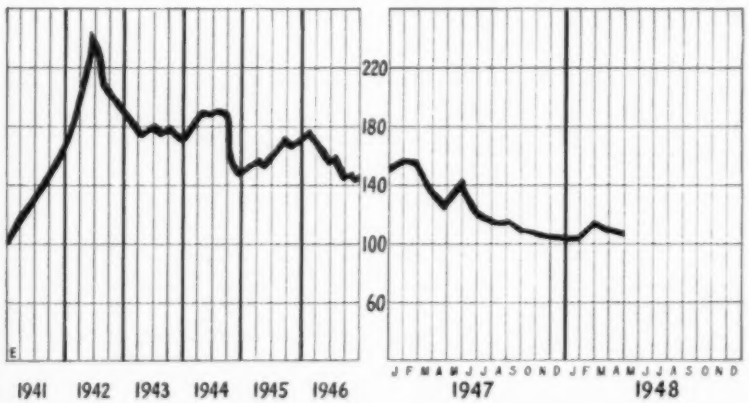
Phenobarbital Advanced

Manufacturers of phenobarbital announced an advance of 50c per pound in the price of this product and now offer at the following prices: 100 lb. drum, $4 per pound; 25 lb. drum, $4.10 per pound; 5 lb. bottles, $4.21 per pound. Phenobarbital sodium USP XIII is offered at the same schedule as above.

Caraway Oil Recedes

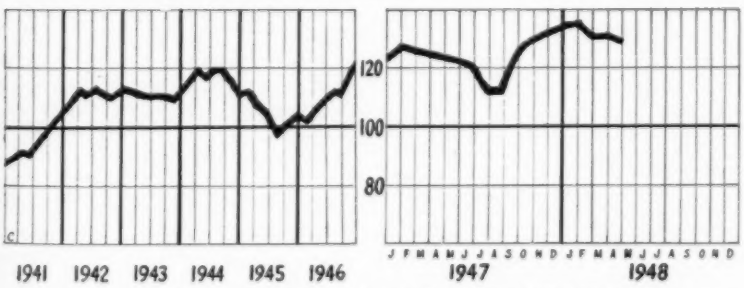
Caraway oil dropped in price from $5.15 to $4.75 a pound on the New York market. This represented the low figure with the outside price at $6.50. Supplies were reported to be good although demand was not what it had been some time back. During the war years and the ensuing period of readjustment, the baking trade found it difficult to obtain caraway seeds and used large quantities of the oil, but as supply conditions straightened out, the seed became more readily available with the result that the demand for the oil fell off.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index declined from 112.1 to 108.2. Cananga, Cassia, Citronella, Geranium and Peppermint were lower.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index declined from 132.7 to 132.2. Alcohol and menthol were down.

Exports of Essential Oils Reunion

Exports of geranium oil from Reunion during 1947 totaled 48 metric tons, valued at 77,241,000 francs. These shipments went to the following destinations: France, 32.2 metric tons, valued at 52,061,000 francs; Madagascar, 1.5 metric tons, 2,792,000 francs; the United Kingdom, 3.6 metric tons, 5,231,000 francs; and the United States, 10.7 metric tons, 17,157,000 francs.

Reunion's total exports of vetiver oil during 1947 were 10.7 metric tons, valued at 37,305,000 francs. These exports were divided as follows: France, 9.5 metric tons, 33,115,000 francs; the United Kingdom, 0.2 metric tons, 699,000 francs; the United States, 1 metric ton, valued at 3,481,000 francs; and the Union of South Africa, 10,000 francs.

Shipments of oil of ylang-ylang from the island of Reunion in 1947 totalled more than 0.7 metric tons, valued at 1,119,000 francs. Most of these exports went to France, the remainder being accounted for by the Union of South Africa (US $1 equaled about 70 C. F. A. francs in 1946-47).

Botanicals Easy

Prices for medicinal botanicals continued to yield ground as demand was still very slow and competition remained strong.

Collections in the domestic primary markets have gotten underway in spring drug merchandise but the deliveries to warehouses in the country were reported to be small, in the main. The season is young and a change in that aspect of collection can come at any time after farm activities in the fields permit some diversion of labor into drug collection. Crops go into the field first in these days of high priced foodstuffs.

Botanical drugs recorded nearly identical import gains for both January 1948 and December 1947. Tonnage receipts in January, amounting to 1,628,914 pounds, represented a 49 percent increase over December while the December arrivals were up 48 percent from November.

Arrivals of psyllium seed in the United States during 1947 totaled 2,964,058 pounds, valued at $1,645,205, compared with 2,636,361 pounds, valued at $276,829 in 1938. In 1947, 99 percent of the shipments by weight and value came from India, while the proportion in 1938 was about 68 percent. Most of the remaining imports of psyllium seed in 1938 were shipped from France.

Your Trade-Mark Record

(Continued from page 665)

Ser. Sept. 12, 1947 D. U. May 15, 1941

Burma-Vita—VI—K—503,864
Burma-Vita Co., Minneapolis, Minn.
Ser. June 14, 1946 D. U. June 3, 1946

Corsaire—VI—C—530,217
Lucien Lelong, Inc., Chi., Ill.
Ser. Aug. 1, 1947 D. U. Nov. 7, 1938

Crackerjack—VI—CE—513,468
Helena Rubenstein, Inc., N. Y., N. Y.
Ser. Nov. 29, 1946 D. U. Nov. 8, 1946

Cupid's Victory—VI—BC—534,312
David A. Molinari, San. Fran., Calif.
Ser. Sept. 12, 1947 D. U. May, 1941

DDD—(and des.)—IV—A—527,096
D. D. D. Corp., Batavia, Ill.
Ser. July 5, 1947 D. U. 1910

D'Ormel—VI—BCH—532,275
The Chemdrug Corp., N. Y., N. Y.
Ser. Aug. 15, 1947 D. U. Aug. 12, 1947

Endocreme—VI—C—534,020
Hirestra Labs., Inc., N. Y., N. Y.
Ser. Sept. 10, 1947 D. U. Feb. 28, 1947

EPSO-Pine—VI—A—493,763
Sidney Goldblum (Majestic Drug Co.)
New York, N. Y.,
Ser. Dec. 22, 1945 D. U. April 1945

Feather Bath—IV—AM—509,172
Soil-O Manuf. Co., Glendale, Calif.
Ser. July 29, 1947 D. U. July 1, 1946

Finell—VI—D—516,590
Victoria Chemical Co., Newark, N. J.
Ser. Sept. 10, 1947 D. U. Jan. 22, 1947

First Love—VI—BC—501,963
Helen English, Inc., Rochester, N. Y.
Ser. May 13, 1946 D. U. Sept. 13, 1943

Flower Petals—VI—B—536,894
Maurice Handman (Maurella Prods.),
New York, N. Y.
Ser. Oct. 6, 1947 D. U. Jan. 30, 1945

Forty Thieves—VI—B—524,817
Anatole Robbins, Inc., Los Angeles,
Calif.
Ser. Sept. 12, 1947 D. U. Dec. 18, 1940

Frenchee—VI—BFC—494,584
Edwin C. Stock (Frenchee Cosmtcs.),
Toronto, Ontario, Canada
Ser. July 15, 1947 D. U. Nov. 3, 1944

Gay Blade—VI—I—499,480
Harry Brode, Flushing, N. Y.
Ser. Apr. 2, 1946 D. U. Mar. 1, 1946

Gibsen Girls'—VI—B—532,444
Dorothy Gibson Perfumes Corp., New
York, N. Y.
Ser. Aug. 26, 1947 D. U. July 23, 1947

Gold Seal—(and des.)—VI—ACHKT—
518,171
Purepac Corp., N. Y., N. Y.
Ser. Feb. 26, 1947 D. U. Apr. 1, 1922

Gold Tassels—VI—B—496,746
Allen Wrisley Co., Chi., Ill.
Ser. Feb. 16, 1946 D. U. May 1942

Golden Apple Blossom—VI—ABC—
518,837
The Lander Co., N. Y., N. Y.
Ser. Mar. 11, 1947 D. U. Mar. 1, 1947

Golden Gardenia—VI—ABC—518,839
The Lander Co., N. Y., N. Y.
Ser. Mar. 11, 1947 D. U. Mar. 1, 1947

Gold Kid—VI—B—519,889
Walter Morris Prods., Inc., Phila., Pa.
Ser. Mar. 31, 1947 D. U. Nov. 5, 1946

Hairever—VI—H—528,553
Eugene Burt Co., Kansas City, Kans.
Ser. July 14, 1947 D. U. July 2, 1947

Hair Trane—VI—H—509,933
E. Frederics, Inc., L. I. C., N. Y.
Ser. Sept. 28, 1946 D. U. March 1938

Halcyon Nights—VI—B—509,734
Staddon & Kilbourn, Ltd., Montreal, Can.
Ser. Sept. 25, 1946 D. U. June 5, 1946

Han-Gene—IV—A—533,689
Geo. L. Williams Co., Cleve., Ohio
Ser. Sept. 6, 1947 D. U. Aug. 14, 1947

His Excellency—IV—I—530,120
Rawlings International, Inc., N. Y., N. Y.
Ser. July 31, 1947 D. U. Sept. 1946

Jabon De Reuter De Jujo—(and des.)—
IV—A—509,519
Lanham & Kemp-Barclay Co. Inc., N. Y.,
N. Y.
Ser. Sept. 21, 1946 D. U. Sept. 23, 1924

Jay Bra—VI—D—499,711
Jaybra Prods., Inc., N. Y., N. Y.
Ser. Apr. 5, 1946 D. U. Jan., 1936

Josai—VI—H—536,625
Jeannette E. McPheeters (Howland
House Dists.), Indianapolis, Ind.
Ser. Oct. 3, 1947 D. U. July 14, 1947

Klover—VI—CHM—519,627
Cheesebrough Manfg. Co., N. Y., N. Y.
Ser. Mar. 27, 1947 D. U. Mar. 12, 1947

Kuan Yin By Strange—VI—BI—515,916
Strange Labs. Inc., Tucson, Ariz.
Ser. Jan. 17, 1947 D. U. Dec. 13, 1943

Lan-Ex—(and des.)—VI—H—498,851
Mal Labs., N. Y., N. Y.
Ser. Mar. 23, 1946 D. U. Jan. 14, 1945

Lanogene—VI—C—523,685
Lanolin Corp. of America, L. A., Calif.
Ser. Oct. 13, 1947 D. U. May 22, 1947

Le Soulier De Satin—VI—ABCHS
Coty, Inc., N. Y., N. Y.
Ser. Dec. 14, 1946 D. U. Dec. 10, 1946

Lester's—VI—CH—488,827
McLester McKee (W. & M. Prods. Co.)
Jersey City, N. J.
Ser. Sept. 21, 1945 D. U. Jan. 2, 1938

Maple Red—VI—C—518,226
Richard Hudnut, N. Y., N. Y.
Ser. Feb. 27, 1947 D. U. Feb. 20, 1947

(To be continued)

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BOOK DEPARTMENT
Drug & Cosmetic Industry
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READERS' QUESTIONS

HAND CLEANSING CREAM: As one one of your foreign subscribers we would like to get your advice. Could you give us a formula and information on the compounding of a cream for cleansing the hands of the housewife? Also the cream should be able to remove the ugly smells from the fingers of these ladies, doctors and other people who work with bad smelling materials. Netherlands.

I believe the following will serve to make a very nice preparation of the kind you wish:

Stearic acid	18.00
Lecithin	1.00
Triethanolamine	1.75
Glycerine	12.00
Alcohol	7.50
Water	59.10
Perfume	0.50
Preservative	0.15

Melt the stearic acid and lecithin. Bring the temperature of the mixture to about 75°C. Put the triethanolamine in water, add the glycerine, heat to 80°C. and stir the stearic acid mixture into it. Stir rapidly until emulsification takes place and continue stirring until the temperature drops to about 40°C. Then add the perfume and preservative dissolved in alcohol and continue mixing until cream is smooth. Insofar as removal of smells is concerned, the selection of a suitable perfume will go far to solving that problem.

LIQUID CHEST RUB: In your issue of May 1947, page 688, you published a formula for a liquid chest rub. Could you tell us if there is any advantage of a liquid rub over an ointment? Would there be any advantage in using alcohol as a base instead of mineral oil? Mechanicsburg.

Without going too deeply into the problem, I would say that, as compared to an ointment, a liquid chest rub probably provides prompter action, but it is quite likely that this action will not be quite so persistent as that provided by an ointment. Of course, a liquid preparation is much more economical to manufacture inasmuch as it does not require as much equipment. You might try using alcohol as a base in such a preparation but I do not think the action of the rub would be as prolonged as when mineral oil is used. There is also the possibility that some of the oils may separate if an alcohol vehicle is used.

LIQUID MAKE-UP BASE: Some time ago, I saw a discussion of liquid make-up bases in your publication. If I recall correctly, this article also included a typical basic formula for making such an item. Do you think you could find the article and send me the formula cited? Detroit.

I believe that the article to which you refer was reprinted in the "Drug & Cosmetic Review," 1946-7. The formula in question is as follows:

Olive oil	75.0
Oil soluble preservative	0.1
Titanium dioxide	24.6
Octyl alcohol	0.1
Perfume	0.2

DENTURE ADHESIVE: I am looking for an adhesive or binder to mix with gum karaya or tragacanth for holding in false teeth. These gums are fairly good under upper dentures but fail under lower dentures when they become excessively wet from saliva. I should like to include something which would prolong adhesiveness. If you have any suggestions please send them along. New York City.

Perhaps you can obtain better results by mixing two gums as in the following British formula:

Tragacanth, fine powder	50.0 parts
Gum acacia	44.5 "
Boric acid	5.0 "
Vanillin	0.5 "

Another preparation from the same source consists of a mixture of equal parts of fine, powdered tragacanth and corn starch.

DEODORIZED KEROSENE: Is deodorized kerosene harmful to the hair or scalp? I believe there was an article on this product in one of your issues of DRUG & COSMETIC INDUSTRY, if so kindly inform me which one. Madera.

I do not recall any article on the use of deodorized kerosene in hair preparations. However, this material is quite extensively used in shampoos, rinses and special mixtures for treating pediculosis capitis (lice in the hair) and similar conditions. The kerosene may of course have a defatting action on the scalp and hair because of its solvent properties but it is frequently combined with oils in treating pediculosis capitis.

the formula is basic

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Nothing could be more to the point in illustrating our case. There is far more to compounding any cosmetic than a knowledge of the basic formula. To achieve maximum results in customer appeal and repeat sales, there must be something else—something that sets a product apart.

For more than 40 years we have served our private label customers with more than the basic formula. We have given them our experience in cosmetic formulation and manufacture which extends beyond chemical knowledge.

Their success has been, in a measure, our success—a measure of product quality and appeal which we should like to demonstrate to you.

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Manufacturers of Private Label Cosmetics

Cellulose Derivatives

(Continued from page 671)

4000; make to 250 cc. and freeze over night. The following morning, mix the two solutions, strain through gauze and, using a pressure spray gun, spray on a horizontal glass surface which has been cleaned with an "Aerosol" solution. A film will form in less than one hour under an infra-red lamp. The formed films can be sterilized in water-proof cellophane.

For burns around the face, genitalia and other areas to which it is difficult to apply and maintain a dressing, Pickrell used a sulfadiazine gel which dries in about five minutes to produce a transparent film. It has the following composition:

Methyl cellulose (15 cps.)	**12.50 per cent**
Sulfadiazine	**3.00 " "**
Triethanolamine	**8.00 " "**
"Carbowax" 4000	**1.50 " "**
"Carbowax" 1500	**1.50 " "**
Parahydroxybutylbenzoate	**0.10 " "**
"Aerosol OT"	**0.05 " "**
Water, to make	**100.00 " "**

Similar film-forming compositions have been described in a patent recently granted to Dixon and Morgan.[27] A typical composition, which is sprayed on burns to form an eschar, is made from:

Methyl cellulose (1500 cps.)	**1.3 per cent**
2-Sulfanilamidopyrimidine	**2.0 " "**
Triethanolamine	**5.3 " "**
Water, to make	**100.0 " "**

Of related interest is Presslies,[28] observation that with methyl cellulose jellies, the pellicle produced on evaporation ensures good contact and is quite elastic. A membrane containing sulfadiazine may be applied directly to burns by spraying a jelly made with 2.5 per cent methyl cellulose.

Similar films have been employed in the treatment of dermatological infections. Draeger and Pijoan,[29] for example, used the following plastic jelly for the treatment of impetigo contagiosa:

Methyl cellulose (15 cps.)	**10.0 Gm.**
Sulfathiazole	**1.0 Gm.**
"Carbowax" 1500	**3.0 Gm.**
Glycerine	**1.0 Gm.**
Alcohol, 70%, to make	**100.0 cc.**

They found that the topical application of such a preparation has the distinct advantage of drying rapidly and not requiring a bandage to retain the therapeutic agent in contact with the lesion.

With certain criteria in mind, Davies[30] has prepared the following base for use in dermatological and other conditions:

Methyl cellulose (Tylose M50)	**6.0**
Glycerine	**10.0**
Chlorocresol	**0.1**
Water	**83.9**

On application of this jelly, the water evaporates after a few minutes with an accompanying cooling effect, to leave a thin, smooth, plastic "skin" or film that is easily removed by stripping or washing. The reaction of the base is pH 6.4 and this remains constant on storage. In addition, there is no apparent decrease in viscosity or other deterioration of the product provided it is packed in suitable containers with airtight caps. The jelly is suggested for use as a vehicle for water-soluble dyes like gentian violet and brilliant green and for local anesthetics, mercury and zinc salts and other soluble and compatible medicaments. Following study of a report on the acid debridement of burns, this base containing phosphoric acid was used successfully in the treatment of third degree burns.

The film-forming properties of methyl cellulose has been used effectively in the production of composite, pre-formed therapeutic films suitable for application to moist lesions. According to the patent,[30] the use of this compound permits the formation of a stable medicating dressing containing two or more therapeutic agents that may be chemically incompatible and permits their simultaneous application in an effective, convenient and simple manner.

Methyl cellulose gives excellent results as a binder in tooth pastes.[9-15] Being tasteless, harmless and inert, it is of value in the formulation of all types of tooth paste, whether alkaline or acid.[21] A typical procedure[2-4] for making a tooth paste with methyl cellulose is as follows:

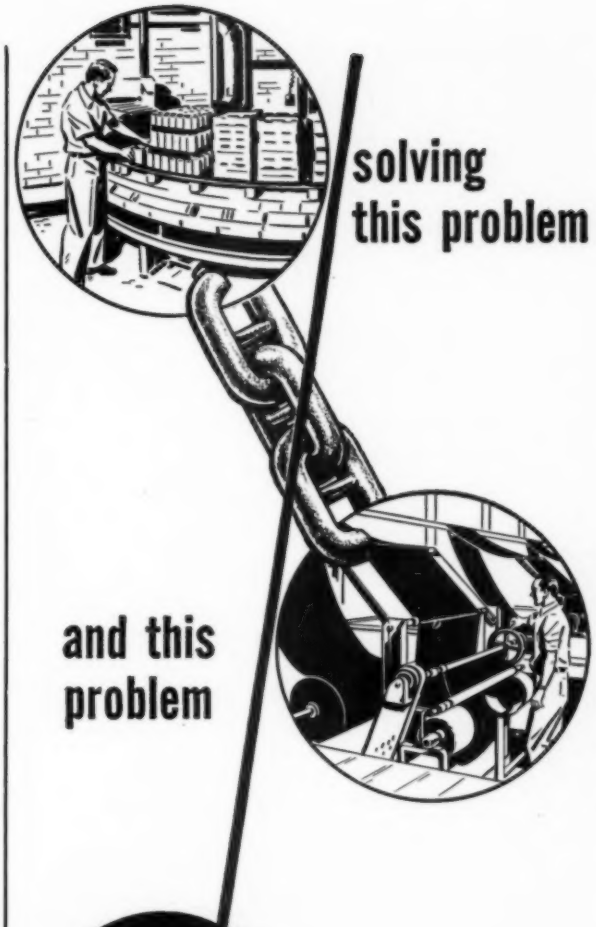
Methyl cellulose	10.0
Distilled water	450.0
Glycerine	50.0
Calcium carbonate, precipitated	450.0
Flavoring oils	9.0
Sodium lauryl sulfate	30.0
Methyl or ethyl parahydroxybenzoate	1.0

Dissolve the benzoate in 150 parts of boiling water and pour over the methyl cellulose. While the mass swells and softens, continue stirring until cool. Gradually incorporate the rest of the water. To this solution add the glycerine, followed by the calcium carbonate and then the sodium lauryl sulfate. Work the mass to perfect homogeneity through a mill. Finally incorporate the dentifrice flavoring oils.

The amount of flavoring will depend to some extent upon the oils used. This may be oil of peppermint or spearmint, or methyl salicylate. A combination dentifrice flavoring oil, which should be used sparingly, consists of:

Oil of cinnamon	28 Gm.
Oil of peppermint	28 Gm.
Oil of cloves	44 Gm.

In preparing this tooth paste, the addition of one part of saccharin as an extra sweetener is permissible. The product may be tinted with tooth powder red. If, however, a snow-white paste is desired, 50 parts of the calcium carbonate may be replaced with titanium



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dioxide. The sodium lauryl sulfate may be replaced, if desired, with a suitable proportion of soft soap.

A liquid dentifrice can be prepared from a 2 or 3 per cent solution of methyl cellulose, with the addition of 5 to 10 per cent of glycerine and alcohol. The inclusion of a sweetener, flavoring, and perhaps a color yields an excellent product. No detergent is required because the methyl cellulose is said[4] to possess soap-like qualities. However, the cleaning action may be enhanced by the addition of 1 to 3 per cent of a detergent such as soft soap or sodium lauryl sulfate.

(To be concluded)

New Developments in Medicinal Agents

(Continued from page 617)

Nidoxital

Another preparation for the control of nausea and vomiting of pregnancy is in tablet form and contains benzocaine, pyridoxine hydrochloride, nicotinamide, *dl*-methionine and pentobarbital sodium. The pyridoxine hydrochloride is necessary for proper fatty acid utilization, as well as helping to maintain normal nerve function, normal erythropoiesis and is necessary in larger quantity where body metabolism is increased. Nicotinamide reduces the peristaltic action of the stomach and small intestine therefore decreasing excitability. The *dl*-methionine tends to prevent cumulative liver damage. Benzocaine as a local anesthetic acts on the peripheral nerve endings and decreases efferent excitation to inhibit transmission of impulses to the vomiting center. The barbiturate, pentobarbital sodium, depresses the vomiting center by its action upon the central nervous system. This product is available as Nidoxital from Ortho Pharmaceutical Corp.

Argypulvis

A new product has been developed which extends the use of mild silver protein (Argyrol) to other fields. This product is particularly designed for use in the vagina in the treatment of *Trichomonas vaginalis* vaginitis. The product is bacteriostatic, fungistatic, protozoicidal and demulcent and contains in addition to 20 per cent of mild silver protein, 40 per cent each of kaolin and beta lactose. It is supplied under the name Argypulvis by A. C. Barnes Co.

Sotradecol

The treatment of varicose veins has always provided a complex therapeutic problem. For the permanent obliteration of such veins, it is necessary to produce a firm and adherent thrombus and then to protect it from excessive hydrostatic pressure for an extended period of time.

Research into various compounds has shown that sodium tetradecyl sulfate or 2-methyl-7-ethylundecyl-4-sulfate is of value in the treatment of this condition. A 3 per cent solution is the equivalent in effectiveness of a 5 per cent solution of the strongest soap type sclerosing agent. Sodium tetradecyl sulfate is supplied in 1, 3 and

5 per cent solutions with 2 per cent benzyl alcohol under the name of Sotradecol by Wallace and Tiernan Products, Inc. This compound produces a penetrating but not diffused irritating action on the intima of the veins. When injected subcutaneously it does not cause inflammation, sloughing or necrosis. A well-demarcated necrosis with a minimum of inflammation will be noted if it is injected intradermally.

Thymine

Thymine is a part of nucleic acid and received its name from the fact that it was first isolated from the thymus gland. Now it is synthesized. Thymine possesses effects similar to folic acid in Addisonian pernicious anemia and nutritional macrocytic anemia of pellagra, pregnancy and sprue. However, much larger doses of thymine are necessary. Within three or four days after therapy is instituted the arrested red blood cells form large islands of regeneration and pass into the blood in great numbers.

Methionine

dl-Methionine is an amino acid which has shown some therapeutic promise in the prevention and treatment of liver injury caused by poisons such as arsenic, chloroform, carbon tetrachloride, anasthetic gases and others. It has also been suggested for treating cirrhosis of the liver, infectious hepatitis, eclampsia and shock. Further investigation is being conducted in substantiation of these possible uses. Methionine is marketed as such by the National Drug Co. and Walker Vitamin Products and as Meonine by Wyeth, Inc. The oral dosage is 2 to 4 grams daily.

Hydrosulphosol

Sulfhydryl pentathionate has been found to act as an epithelial stimulant and as such is of use in burn therapy. Incorporated into the product Hydrosulphosol, sulfhydryl pentathionate presents sulfur in a free colloidal form with a high concentration of sulfhydryl. Thus it is thought that sulfur is available in a form which is utilizable by the body in the synthesis of sulfur-containing amino acids. Application of this substance to an injured area deposits a thin layer of sulfur or calcium and during the process of forming a coating sulfhydryl or sulfur is absorbed by the body. The coating should be maintained in a thin pliable layer.

In addition to skin burns this compound is particularly valuable in eye burns. A dilution of 1:40 (pH 8.2) in warm triple distilled water is dropped into the eyes every 30 minutes to 2 hours dependent upon the extent of injury and other factors. Compresses of a 1:20 dilution (pH 8.5) in warm distilled water should be applied to the outside of closed lids continuously for several hours. Concentration of the solution by evaporation will produce a concentrate which can be incorporated into a cold cream base for use on areas outside of the eye. This product in conjunction with penicillin in multiple corneal ulcers produces better results than penicillin alone. No toxic reactions or contraindications have been noted. Hydrosulphosol is marketed by Rees-Davis Drugs, Inc.

KOMMON/ SCENTS!

Reluctance of so many leading Democrats to nominate Truman for the Presidency is the most embarrassing development since faulty zippers.

•

And the discontent is as subtle as a piano falling off the White House balcony—with pianist attached.

•

Poor Harry is understandably confused, with the Southern Democrats screaming he's "Red," while his Northern critics say he's too colorless a leader.

•

Two funniest cracks at his expense concern the Truman partisan who said: "In mid-stream, never change horses. Or any part thereof."

•

And the dear little old lady at a Draft Eisenhower Meeting, who wondered: "What would President Truman think about all this, if he were still alive?"

•

At press time, it looks like a Presidential contest between Generals Eisenhower and MacArthur, winner to meet Generalissimo Stalin.

•

If Eisenhower's supporters had resisted the war-time draft as strongly as Ike rejects the Presidential draft, nine out of ten Commandos would have been Conscientious Objectors.

•

MacArthur, of course, has generously accepted the urgings of that political savant, Shirley Temple, and that restrained, unselfish, fully objective 102% American, William Randolph Hearst.

•

Off their unsuccessful records as Roosevelt opponents, former Hearst candidates will go down in history as also-Randolphs.

•

In fact, one of his handicappers should tell Mr. Hearst that the only "Man on Horseback" who can interest Americans is the little guy who boots home winners at Belmont, Pimlico and Hialeah.

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Urethane

Ethyl carbamate has been reported to have a palliative effect in cases of myeloid or lymphatic leukemia in humans. It has been shown to retard the growth of certain neoplasms although such alteration was not permanent. Relapses took place and immature cells reappeared in the blood. However it does show possibilities and opens a new field of investigation.

Hemokin

Recent literature has shown that menadione (vitamin K) is of value in counteracting the possibility of hemorrhage in salicylate therapy. This is particularly of value in conditions such as rheumatic fever and gout where extensive salicylate therapy is used. For this reason acetylsalicylic acid and menadione have been combined in one preparation.

Hemokin, Winthrop Chemical Company's product, contains 0.3 Gm. of acetylsalicylic acid and 0.3 mg. of menadione in each tablet. This product is also indicated as an analgesic in neuralgic and muscular pains, headache, migraine, head colds and after tonsillectomy and adenoidectomy. Lakeside Laboratories have available Menacyl which contains acetylsalicylic acid 0.33 Gm., menadione 0.33 mg., and ascorbic acid 33.3 mg.

Meprane

A new synthetic estrogen, 3,4-bis-(*m*-methyl-*p*-propionoxyphenyl) hexane has been made available for oral administration in the menopausal syndrome and in other clinical manifestations of hypoestrinism amenable to estrogenic therapy as well as in suppression of lactation. Because of its potency only a relatively low dose is necessary and the drug is well tolerated. Reed and Carnrick are marketing this drug under the name Meprane.

Diphtheria, Tetanus and Botulism Toxoids

Pure diphtheria toxoid was isolated early in 1947. This marks a great advance in this form of therapy since it can now be used in persons of all ages without side reactions. The crude diphtheria toxoid could be used only in very young children without experiencing unpleasant side reactions. One ounce of the pure form will protect 400,000 persons. The Institute of Pathology of Western Reserve University, in addition to isolating the diphtheria toxoid, also recently isolated the toxin of tetanus. U. S. Army chemists have also announced the isolation of the toxin of botulism. Great advances are being made in this field.

Multiple Injection Products

Three antigens are now being combined in one vial so as to simplify the immunization of children. These combinations include diphtheria, pertussis and tetanus, thus allowing for a single injection rather than three. It is hoped that in the future scarlet fever and typhoid will also be included. The advantages of this method are obvious.

Diopterin and Teropterin

A recent announcement stated that two new synthetic substances were being tested in retardation of cancer in humans. Although not believed to be cures, enough change has been shown to justify further tests. Pteroyl diglutamic acid or Diopterin and pteroyl triglutamic acid or Teropterin, derivatives of folic acid, are the chemicals being tested by Lederle Laboratories. For the first time the cancer problem has been approached from a nutritional standpoint. The substances are administered intravenously or intramuscularly and it may be several weeks before effects are noted.

Antibiotics

Several new antibiotics have been discovered recently, among which are included Aerosporin, colistatin, erythrin, litmocidin and two from wild ginger. Aerosporin has been shown to be bactericidal to the Gram-negative *Hemophilus pertussis, Eberthella typhosa* and *Escherichia coli* in the field of human medicine and *Brucella bronchiseptica and Escherichia coli* strains of calf scour in veterinary medicine. Colistatin is a bacteriostatic agent and has shown some effect against staphylococci, pneumococci, *B. coli, B. proleus, B. paratyphosus B., B. dysenteriae Shiga* and *B. typhi abdominalis*. Erythrin, discovered by the Russians, has shown effectiveness against diphtheria. Litmocidin is bacteriostatic and bactericidal to most strains of staphylococci, streptococci, and vibrio comma. Two antibiotic substances, A and B, have been isolated from wild ginger (*Asarum canadense*). A has been found to be active against the pus forming Gram-positive bacteria, staphylococcus, streptococcus and pneumococcus but has no effect on intestinal bacteria. B has less activity.

All of these antibiotic agents reauire more extensive investigation before any definite statements as to their value in therapy can be made.

Another product of tyrothricin was recently released by Sharp and Dohme Inc. Tyrozets are antibiotic and anesthetic throat lozenges indicated in the treatment of mouth and throat infections due to Gram-positive organisms. They are also useful following tonsillectomies. The benzocaine present soothes irritated tissues and relieves irritation. Each lozenge contains 1 mg. of tyrothricin and 5 mg. of benzocaine. One is to be dissolved slowly in the mouth every 3 hours.

Various improvements in penicillin have been made, such as the crystalline potassium salt of penicillin G by Commercial Solvents Corp. This salt is high in purity, heat stable and does not require refrigeration. In patients with certain types of heart disease and Bright's disease, who have a limited tolerance to sodium, the potassium salt is particularly advantageous.

The announcement of the synthesis of benzylpenicillin was another striking advance. Although nowhere near a production basis it promises new horizons.

New developments have gained prominence in streptomycin therapy as well. It has shown great promise in the treatment of certain urinary tract in-

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fections and possibilities in tuberculosis. The preparation of the Calcium Chloride Complex of Streptomycin by Merck and Co. has provided a more pure product as well as one with uniform potency, decreased toxicity and one which gives minimum pain on injection.

One of the problems with penicillin and streptomycin is the rapid excretion, making it necessary to give large and frequent doses. Recently it was shown that pectin was found to slow down this rate of excretion. A 0.5 Gm. dose of streptomycin was maintained for 48 hours. Further studies are being carried on, as well as studies on the effect of pectin with other drugs such as ephedrine, epinephrine and insulin.

A new product, which blocks the kidney tubules and holds the penicillin in the body longer, was recently announced. Known as caronamide, this synthetic substance chemically is 4′-carboxyphenylmethanesulfonanilide. Penicillin is also excreted through glomerular filtration, but by blocking the renal tubules only about 20 per cent of the drug is excreted at the normal rate. The drug used for this purpose of course must be nontoxic and not affect any other kidney mechanism. Caronamide appears to compete for the enzyme through which penicillin excretion is effected. This compound when administered with penicillin in clinical trials has shown remarkable results in all penicillin-sensitive organism-caused infections and particularly in gonorrhea. It is available as Staticin Caronamide from Sharp and Dohme Inc.

Penicillinase is a laboratory reagent which inactivates penicillin. It is a type of enzyme and is used in making cultures of body fluids from patients being treated with penicillin. Penicillin levels in the body fluids of these patients may inhibit the growth of the infecting organism if still present. Thus a test with penicillinase limits the possibility of false negative cultures. When added to the culture before incubation it destroys penicillin within an hour and permits the remaining bacteria to grow. Penicillinase is marketed as a dry powder by Schenley Laboratories Inc. One unit is that quantity which in 11 ml. of pH 7.0 solution containing 50 Oxford units of penicillin will destroy in 1 hour at 37°C. an amount of penicillin equal to 57.5 per cent of the penicillin recovered in control.

Hyaluronidase

Hyaluronidase is an enzyme prepared from bovine testes and other sources which possesses the property of hydrolyzing hyaluronic acid, one of the polysaccharides found in the intercellular ground substance of connective tissue and a constituent of certain specialized materials such as the vitreous humor and umbilical cord as well as some micro-organism such as in the capsules of A and C hemolytic streptococci. It is a spreading factor and occurs as a protein or closely associated with a protein. Hyaluronidase has been tested for its effectiveness in various conditions. Most striking results have been achieved with it in hypodermoclysis and infertility. In the former a preliminary injection of 10 to 20 micrograms of hyaluronidase in 1 to 2 cc. of saline

accelerates the absorption of hypodermically administered fluids, such as 5 per cent glucose in physiological saline. The enzyme is injected at the site and hypodermoclysis is begun without withdrawing the needle. It may also be injected into the tubing.

The effect lasts for about 24 hours, and consists of a marked increase in the rate at which the fluid is taken up by tissues having such elasticity as to render the inflow and uptake of fluid unduly slow; in lax, dehydrated tissues the absorption, already rapid, is not greatly increased. It is suggested that such an accelerated clysis might be of advantage for administering saline, and even plasma, in cases where intravenous therapy is difficult and large amounts of fluid are desirable with a minimum of delay.

In fertility hyaluronidase has been shown to play a physiological role in the fertilization of the ovum by dispersion of the corona cells. It may be added to the semen before artificial insemination or applied to the cleaned cervix shortly before coitus.

Hyaluronidase is available for clinical investigation from Schering Corp.

Molecular Distillation

(Continued from page 605)

the separation of sterols like cholesterol, for the separation of vitamins from marine and other oils, for the recovery of tocopherols from vegetable oils, for the separation of mineral oils into several fractions, and as an analytical and research tool.

There is little doubt that short-path or molecular distillation will find increasing use within the immediate future.

Hair Preparations

(Continued from page 611)

the hair and is utilized as a rinse after a permanent wave has been administered in order to allay the harshness which often accompanies a permanent wave. Several of the rinses recommended for use after a permanent wave, now on the market, have quaternaries incorporated in order to produce this effect. These preparations usually contain about 1 per cent of a quaternary ammonium compound as part of an emulsion, which is diluted before use. A small amount of the cationic agent is capable of exerting a good generalized effect.

A broader discussion of quaternary ammonium compounds in relation to cosmetic usage will be included in a paper which will follow. Commercial availability of these substances is rather recent and many phases of their mechanism is still under observation and study. Their appearance, however, has opened a broad new field for research because of their substantive qualities and because of the possibility of synthesizing new types of emulsifiers which would broaden the functional scope of emulsions generally.

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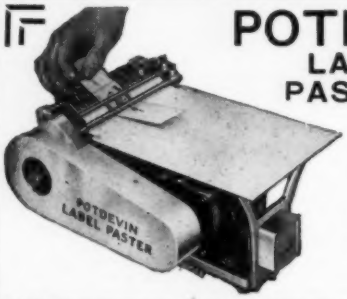

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Political Markets

(*Continued from page 608*)

declined as ample bergamot at a favorable price has returned to this market.

Italian lemon oil at one time had a reputation for superior quality. Recently large quantities of an inferior grade has arrived here and has been in great demand at a price as low as $1.85 a pound.

Orange Oil is also available in Italy. But so many world sources exist for this oil, including our own excellent grades, that little is brought in, and Italian efforts are being made to foster the more advantageous cultivation of the lemon. Both lemon and orange oil are in adequate supply in this country from California and Florida.

Some jasmin (Sicily) and Neroli are produced in Italy. France usually takes this supply.

Java and the East Indies: Citronella, Vetinvert, Patchouli, Carranga, Cayuput, Vanilla.

Citronella prices are easier and world supply adequate. Many users have found satisfactory substitutes for citronella and its direct use has declined. It is still important for its chemical derivatives such as geraniol, citronellol, etc. and is required in substantial quantities by the aromatic chemical manufacturers. Central and South America can supply this market, as they did during the war.

Patchouli is produced in the east and there is no substitute for this important oil. That is why prices during the war went to over $100 a pound. It is in free supply now and you can get all you want at about $10 a pound and up, according to quality. Age is an important factor in Patchouli quality, which must be considered as part of the consideration in supplies.

Carranga is available from the Dutch East Indies. This oil is generally considered to be a cheap grade of Ylang Ylang. Actually it is procured from the wood, while quality Ylang Ylang is procured from the blossom. The best grade of Ylang Ylang before the war came from the Philippines. This industry does not seem to have been restored as yet.

Vetivert from Java has always had the preference of perfumers. It has a smoky note that is characteristic and desirable. The Bourbon Islands and the Comoros produce Vetivert and during the war substantial planting in Haiti was made. This later Vetivert is useful for making Vetivert Acetate.

Cayuput is freely available at lower prices.

Vanilla is produced principally in Madagascar. Mexico and Tahiti could not meet requirements should this source be cut off. But vanillin from wood, coal tar and cloves is an increasing supplement.

Yugoslavia and Hungary: Oak Moss, Coriander, Belladona, Henbane and other botanicals:

Oak Moss is scarce. Little is coming from Central Europe. This important perfume oil was in great demand during the war and short supplies were widely scrambled for and in great demand.

Synthetics or rather simulations were developed which replaced Oak Moss in less expensive compounds. Some Spanish material is said to be available. It is reported that cultivation of Coriander has been largely discontinued because of the need for food.

The crude drug situation in this area is very tight. Some belladona ordered last September has not yet arrived and there are no definite indications that it will be shipped at all. This is true also for henbane.

American production of belladona is under strict and scientific control. If necessary, it could supply this market.

Arabia and the Sudan: Olibanum, Myrrh, Labdanom, Tragacanth, Arabic

Gums are in ample supply at present and are coming in regularly. All of these gums, for most of their uses, can be replaced by such products as Sodium Alginate and the various cellulose derivatives. Political upheavel in Moslem areas would not seriously trouble the formulas of this industry.

The war moved manufacturers of this industry a long substantial distance toward independence for most imported raw materials. That fact alone will more and more influence world markets for these goods.

But America is also moving forward in international trade agreements. We are anxious to foster our own exports. E.R.P. will spread its influence throughout the world.

With stabilizing world conditions Americans must import. We need the quality of many of these natural materials. We may have to adjust our economy to use many of them.

STABLE DEODORANT: Can you send us information on an inexpensive formula for a deodorant for use after dilution around stables, stalls, and the like? Westwood.

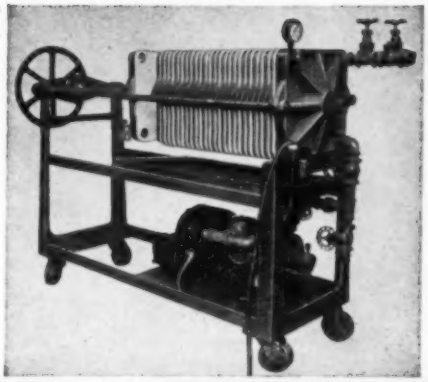
This, of course, is a little out of our line. However, pine oil emulsions have long been used for such purposes and have a good deodorizing effect. Recent reports indicate that the quaternary ammonium compounds also have excellent deodorizing properties.

ANTI-FOGGING PASTE FOR GLASSIES: I understand there is a paste that can be rubbed on eye glasses so that they will not steam over when on a cold day one goes from the street to a warm room. Can you give me a formula for such a product? Sayre.

A quite simple paste for preventing fogging of glasses can be made from the following:

Soap	**70**
Glycerine	**30**

Soaps with fillers of any kind should be avoided. A soap of coconut oil base is quite satisfactory. The amount of glycerine used is arbitrary; varying with different soaps and with different water content. The ideal consistency is a stiff paste. To use, apply a small amount of the paste to a soft cloth and rub on both sides of the spectacles, then polish until thoroughly dry.



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